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Oil, Gas & Energy Law Intelligence

How is Russia's Gas Export Strategy Evolving and Why Will it Work for Russia? (Part 1)

by A.A. Konoplyanik

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How is Russia's Gas Export Strategy Evolving and Why Will it Work for Russia? (Part 1¹)

Prof. Dr. Andrey A. Konoplyanik^{2, 3}

Russia has been adapting its gas export strategy in line with the developing trends of its gas export markets, both where it is already present and where it aims to be present. The present markets for Russia today are mostly the stagnating mature European market of pipeline gas with some limited supplies to the Asian LNG market (mostly to Japan, from the single Russian LNG plant within the PSA project "Sakhalin-2"). It also tries to target the globalized market of both pipeline gas and LNG which is developing, especially its Asian segment, and, most importantly the growing and potentially huge Chinese market.

The triggering effect for this adaptation was made, from my view, by some major factors which resulted in a new post-2009 "Broader Energy Europe"⁴ with a more competitive environment for Russian gas. Demand-side changes such as the economic recession, improving energy efficiency and inter-fuel competition (especially in electricity generation) has slowed-down and even stagnated gas demand growth. Supply-side changes have increased gas supply to Europe. This happened mostly due to rerouting post-2007 to Europe of Qatari LNG flows destined for USA, where, in result of the shale gas revolution, domestic gas demand has declined and *de facto* closed US demand for import gas. As a result, the EU gas market post-2009 entered into oversupplied phase of its development cycle which established a downward pressure on gas prices. Institutional changes, such as the entering into force of the Third EU Energy Package (Sept. 2009), has established a totally new and much more competitive architecture of the EU internal gas market. Finally, unfortunate political developments have resulted in at least two major Russia-Ukraine gas transit crises (Jan. 2006 and Jan. 2009) which required Russia to reassess its transit component of its gas

¹ The shortened, adapted and edited initial version of this material (presented in Part 1 of the article) with much less illustrations was published under the title "Russia's evolving gas export strategy" in "Energy Economist", Issue 408, October 2015, p.11-16

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³ **Disclaimer:** Views expressed in this paper do not necessarily reflect (may/should reflect) and/or coincide (may/should be consistent) with official position of Gazprom Group (incl. Gazprom PSC and/or Gazprom export LLC), its stockholders and/or its/their affiliated persons, reflects personal views and are within full personal responsibility of the author of this paper

⁴ Under this term this author understands the geographical area covered with immobile capital-intensive fixed energy infrastructure (firstly pipelines and grids) covering the whole energy value chains from the well-heads in the resource-owning states to the end-users in the EU, which in gas, in terms of geography, includes the whole geographical Europe per se, Northern Africa, part of Asia (such as Western Siberia and Central Asia today and also Middle East in the near future). (A. Konoplyanik. A common Russia-EU energy space (The new EU-Russia Partnership Agreement, *acquis communautaire*, the Energy Charter and the new Russian initiative). - "Oil, Gas and Energy Law" (OGEL), Special Issue on EU-Russia relations, vol.7, issue 2, May 2009)

export strategy, which is still in the process of adaptation to address the new realities in the international gas market⁵.

1. Preconditions for a new Russian gas supply model to Europe

Russia's response to the evolving realities of the EU gas market aim for an increased diversification and flexibility from an exporter's position with the aim to continue maximizing marketable (monetized) mineral resource rent for resource-owning state (Russian Federation) by its sole export corporate agent - by law - for pipeline gas export (state-majority-owned Gazprom PSC).

Since 1968, when the first Soviet gas came to Western Europe, till today, the delivery chain of Russian gas to the EU end-user consists of a chain of three pairs of consecutive long-term contracts (LTC) with a supply and transportation contract within each delivery deal. Commodity and capacity markets in the EU were bundled till 2003, when Second Energy Package came in force, since then they are unbundled, but both contracts within one deal are mutually correlated. Post-2009 the internal EU gas market architecture resulted from the Third Energy Package has become very different from before with an evolving system of "entry-exit" market zones with virtual trading points (VTP/hubs) within unbundled commodity and capacity markets.

Today's unbundled EU **commodity** market is a mature and oversupplied one (either contractually or physically) with growing "gas-to-gas" competition. Now it has two equal market segments (about +/-50% each) of contractual & spot trade/deliveries in a competitive coexistence. The stagnated EU gas market required Russia to assess its diversification strategy.

The unbundled **capacity** market means that a gas supplier can act within the EU as a shipper only. Capacity allocation for available transportation capacity with the mandatory third party access (MTPA) shall be provided in the EU by auctions. New capacity shall be allocated either by auctions (default procedure) or, in case of demand for new capacity at more than two interconnection points (the case of cross-border new pipelines) and/or conditional booking of new capacity by the shipper, by "alternative capacity allocation mechanisms" (Art.20(d) of the draft Capacity Allocation Mechanism Network Code), which *de facto* means an "open season" procedure.

Diversification of routes/means of supplies also means a transition from GOSPLAN's "single pipeline concept"⁶ (one pipe/corridor to export market) to "multiple pipelines concept" (at least two pipes/corridors or means of supply to each export market) and is based on change of risk assessment/minimization concept of export supplies. The former "central planning" approach was based on the direct control of each export route through to delivery points of Russian gas to the EU which were located at the former border between Western Europe and COMECON⁷; this is why it was cheaper since it took into account only technical costs (as

⁵ A.Konoplyanik. "Russian gas in Europe: Why adaptation is inevitable". - *Energy Strategy Reviews*", March 2012, Volume 1, Issue 1, p. 42-56

⁶ Historically, all export-oriented gas supplies from USSR/Russia to the West (to the EU) were initially organized in a way which provided capacity-concentration (economy of scale) effect, thus within one export corridor via Ukraine-Slovakia-Czechia to the EU borders

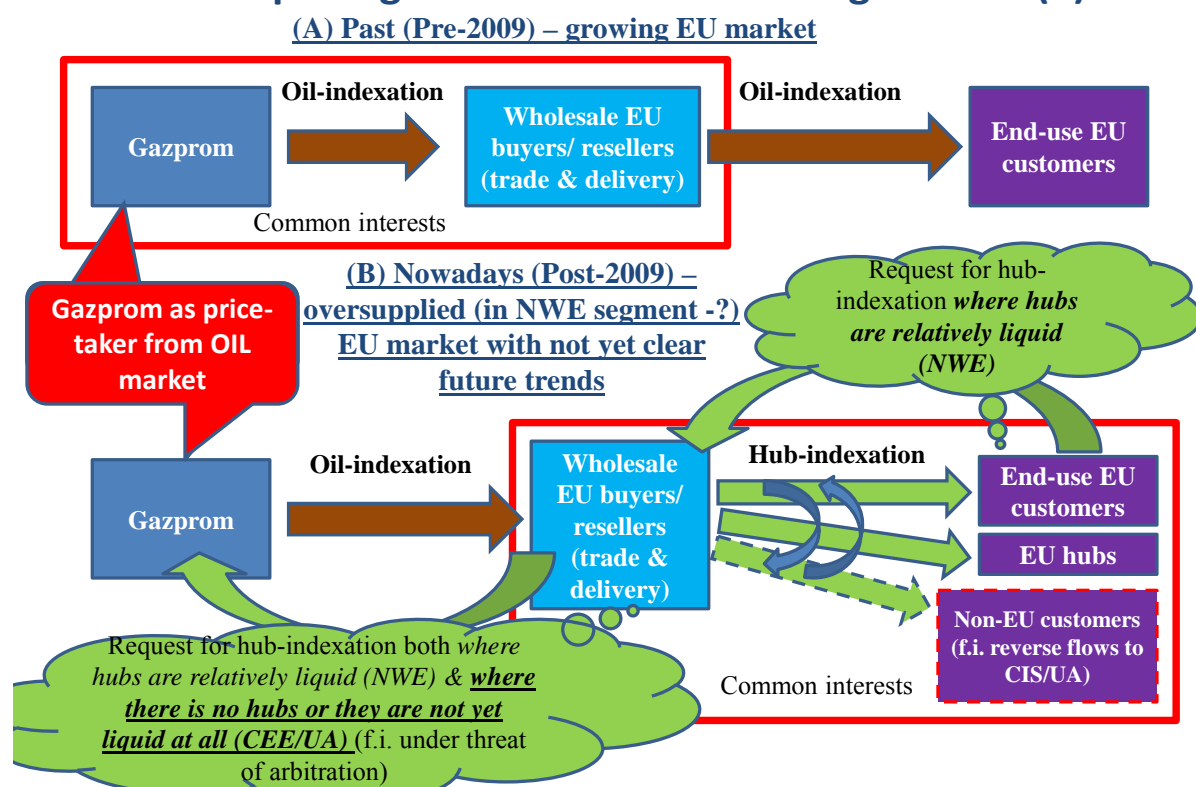
⁷ Council for Mutual Economic Assistance (also CMEA)

transit risks did not exist at all)⁸. Today's competitive choice among several different routes/means of supply is more costly than GOSPLAN's non-competitive approach, since it takes into account comparative costs and risks (firstly, transit risks), and thus both technical and financial costs of risk mitigation. This is why the economic justification of new Russian pipelines/means of supply to the mature EU markets is based not so much on new gas, but is aimed at transit risk mitigation and liquidation of risky transit monopoly (the reason for diversification of export routes).

2. Adaptation within the new EU gas market architecture (new supply flexibility)

In the past (pre-2009), with a growing EU gas market, Gazprom's export strategy in the EU has been based on full dominance of LTC with oil-indexation (more precisely – with indexation to petroleum products or PP-indexation) – a standard approach based on the “Groningen-type” LTC. Gazprom was (and still is) a price-taker from the global oil market. In the epoch of increasing/high oil prices and undersupplied gas market this enables Gazprom to earn highest possible marketable resource rent for its sovereign state. This is why, in my view, oil-indexation is not the end but just the mean for Russia/Gazprom – it is the best effective instrument for maximization of mineral resource rent collection through high oil prices periods (Figure 1-A).

Figure 1. New supply model for EU: Evolution of gas value chain & pricing mechanism of Russian gas to EU (1)



(Figure 1)

⁸ A.Konoplyanik. Gas Transit in Eurasia: transit issues between Russia and the European Union and the role of the Energy Charter. – “Journal of Energy and Natural Resources Law”, vol. 27, #3, August 2009, p. 445-486

Prior to 2009 (a period of an undersupplied EU gas market and high oil prices) the “Groningen scissors” effect had been softening gas price burden on the consumers: on the one hand, they were spending more money on their gas bill due to growing/high oil price; on the other hand, due to the mechanism of “Groningen pricing formula” (gas price for current quarter is linked to the mean value of the PP prices through the “reference period”, i.e. 2 or 3 preceding quarters) gas buyers constantly saved money since the mean value of oil price through such reference period has been (as a trend) always lower than the current oil price; the same applies to gas.

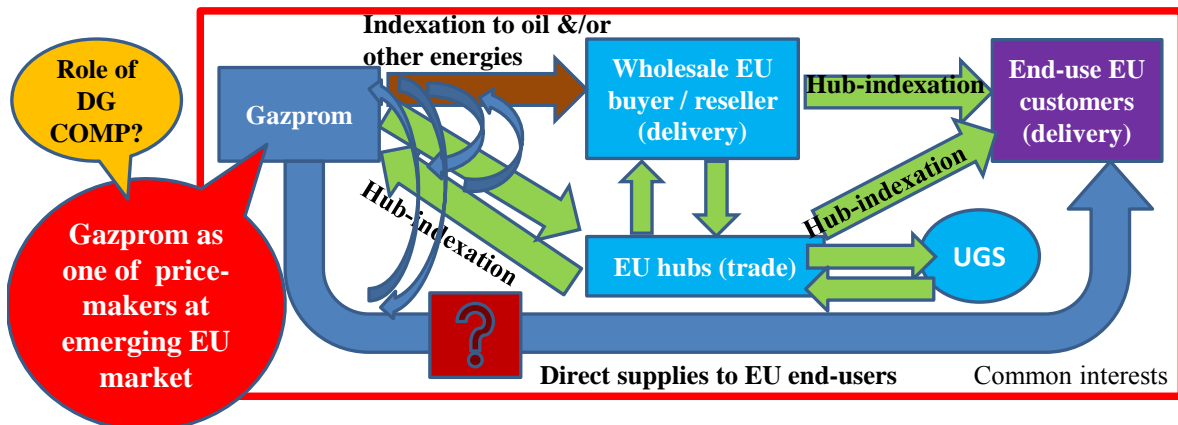
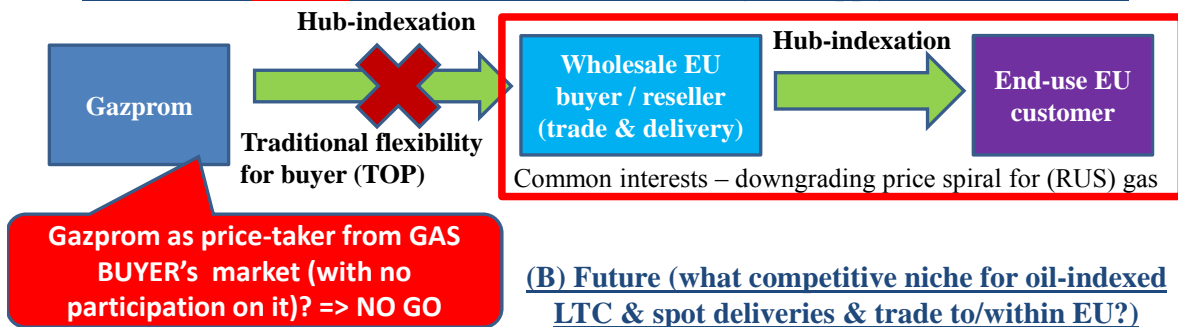
In 2009-2014 (a period of an oversupplied gas market and high oil prices) EU wholesale buyers of Russian gas were under administrative and economic pressure to abandon LTC with their end-users and to switch their resales of Russian gas at the retail market to hub-indexation. This initiated requests from EU wholesale buyers of Russian gas to switch to hub-indexation in their supply contracts with Gazprom. Such requests sounds logical in the geographical areas where hubs are relatively liquid due to available competitive supplies (for instance in North-West Europe (NWE) due to North Sea production and LNG supplies): wholesale buyers/resellers of Russian gas were to buy it at high oil-indexed price under high “take-and/or-pay” (TOP) obligations and to resell at lower hub-based price. To stay competitive, Gazprom and other suppliers thus began to add hub-indexation component into their oil-indexed pricing formulas. But such requests for hub-indexation in Gazprom’s LTC came not only for the areas where supply competition is relatively strong and the hubs are relatively liquid (NWE), but also (even under appeal to arbitration) for the areas where there was (and still is) no supply competition, no hubs or they are not yet liquid at all, like in South-Eastern Europe or Ukraine (SEE/UA). At such non-competitive export markets a resource owner (Russia) possesses its sovereign right to continue maximizing its mineral resource rent by staying with oil-indexation (with possibility for unilateral price-discounts) until, and unless, there is no alternative choice to its supplies for the consumer, and if oil-indexation provides the highest marketable resource rent. However, such an approach stipulates buyers to search for alternative supplies to create supply competition, f.i. through enforcement of EU legal provisions for obligatory physical reverse flows capacity at each EU interconnection point since December 2013 (Figure 1-B).

What is definitely non-appropriate for Gazprom, is to “adapt” to hub-indexation in its LTC and to stay with the current LTC structure with its high TOP obligation and flexible nomination rights for buyers (Figure 2-A). In such a case, all price risk is placed on the producer; while wholesale buyers/ resellers of Russian gas experience zero price risk (they buy and sell at same price).⁹ Moreover, through high TOP and flexible nomination rights they can buy excessive volumes of Russian gas and then sell them at the hubs thus providing repetitious spiral of downgrading price pressure to the detriment of the producer who is facing increasing upstream costs and risks due to the worsening natural conditions of gas production. So Gazprom will remain a price-taker, though not from the oil market, but from the EU gas hubs, being not adequately present there. This means that being one of the major gas producers and resource owners it will be *de facto* cut of the price-making role which will be left to wholesale intermediaries (midstream companies) – the buyers and resellers of its gas further downstream to retail market.

⁹ See, for instance: С.Комлев. Спор о цене. – «Газпром», №12, декабрь 2010, с.13-17 (S.Komlev. Debate on the Price. – “Gazprom”, N12, December 2010, p.13-17)

Figure 2. New supply model for EU: Evolution of gas value chain & pricing mechanism of Russian gas to EU (2)

(A) Future (“NO GO” contractual scheme under any (?) supply-demand scenario)



(Figure 2)

Nowadays, with declining oil prices (which seems to me to be, contrary to 2008-2009 oil price collapse, not a short-term, but a mid-/long-term phenomenon), we are facing an oversupplied EU gas market with low oil prices. In this given oil-price environment, Gazprom, as well as all other long-term suppliers with oil-indexation, might not receive the highest possible marketable resource rent through such a LTC pricing mechanism, compared to the spot pricing mechanism. So producers, including Gazprom, are searching for supply flexibility (within a two-segment physical gas market contractual structure – LTC and spot) enabling them to maximize marketable resource rent collection within more a competitive and oversupplied EU market. This means that compared to the previous period, when it were the buyers of Russian gas who requested for adaptation of Gazprom’s contractual structure (with the aim to diminish price burden of PP-indexation and high TOP in Gazprom’s LTC)¹⁰, today it is Gazprom itself who is searching for more flexible export strategy to maximize its resource rent collection in more competitive environment. In the given circumstances Gazprom shall not be “addicted” to oil-indexation.

So Gazprom shall be present at both the contractual and spot wholesale segments. In case of LTC with indexation formulas (which is an upstream investment tool mechanism), further deviation from oil/PP-indexation will continue to take place. Producers/exporters will negotiate more flexible contractual structures where lower level of TOP deliveries with indexed (not necessarily to PP only/mostly) gas price will correlate to higher level of spot

¹⁰ A.Konoplyanik. Gazprom’s concessions in oil-indexed long-term contracts reflect “forced adaptation” to new realities. - “Gas Matters”, April 2011, p.26-28

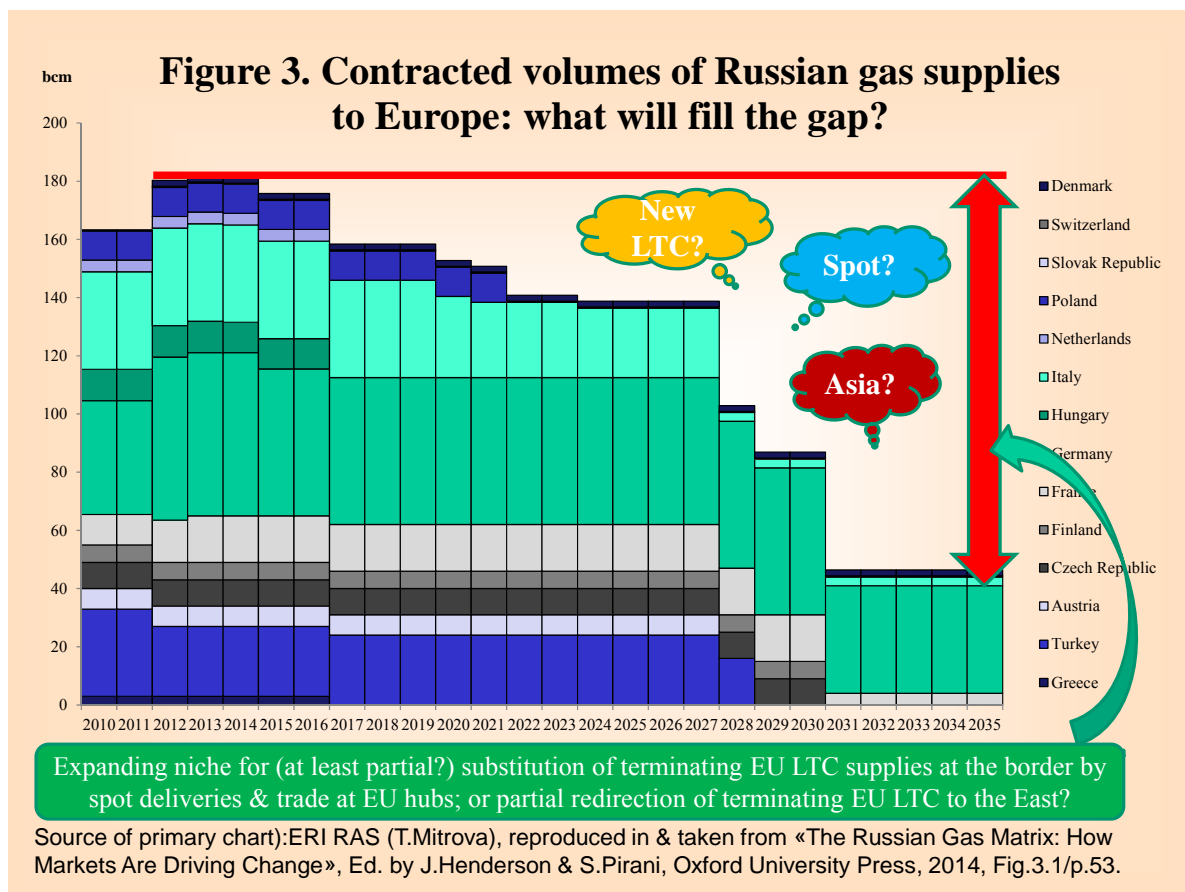
sales (both for trade and delivery) with hub-based prices. What is most important, that transference of contractual volumes to spot segment within LTC should be made possible to provide suppliers with the similar choice that wholesale buyers already possess today.

Gazprom shall be present at the EU hubs directly as a gas seller (Figure 2-B), and not only indirectly, mostly to its detriment, as today, when “excessive” TOP gas is sold there by Gazprom’s wholesale buyers. When Gazprom is to be present at the hubs, it will become one of the price-makers there. From my view, this will be an objectively justified step, though who knows how DG COMP will react on this... Hubs development should be followed by creation of adequate underground gas storages (UGS) to enable a hubs liquidity (in two-segment EU gas market contractual volumetric flexibility should be complimented by corresponding hub-related flexibility which is provided not by the hub itself, but by UGS closely linked to hub). So Gazprom as an exporter and seller at the hub should continue increase its presence at EU UGS (to purchase/rent their capacities). Such approach can help to soften, inter alia, Ukraine’s gas problems to the mutual benefits of Russia, Ukraine and the EU (see further below).

Reassessment of the best effective ways for Gazprom to directly access EU end-users (a possibility which is provided by Third Energy Package) is also under way. Such former concepts as to buy/construct new EU gas-fired power stations and to supply them with Russian gas seems not economically attractive nowadays when gas-fired electricity is considered in the EU to be a back-up with low utilization rates for renewables and also it is less competitive to coal (at least this was true for oil-indexed gas prices at high oil price environment).

As shown in Figure 3, contracted volumes of Russian gas supplies to Europe have reached its peak and began to diminish. Thus Russia (as sovereign state seeking for maximization of its long-term mineral resource rent collection) is facing a long-term dilemma dependent on the effective adaptation of Gazprom’s export policy at the internal EU gas market to the mutual benefits of the parties involved. How will Russia aim to deal with a “contractual challenge” at the EU market? Whether it will renegotiate substitution of terminating EU LTC supplies by modified LTC and/or spot deliveries and trade at EU hubs; or whether it will prefer at least partial redirection of terminating EU LTC to the East (China, etc.)? The answer will strongly depend on results of commercial negotiations with EU companies, but also on the EU authorities’ attitude and their readiness to take into consideration justified concerns of Gazprom as major non-EU gas supplier within the current political climate. In the meantime, Russia has been evaluating alternative options, both within and between current the EU and prospective Asian (primarily Chinese) gas commodities markets, trying to find a new balance of risks and rewards for its gas export strategy. It is from this point of view (the search for new gas export opportunities) that one should assess the fact and the results of the series of gas auctions that “Gazprom export” has organized since early September 2015 in Saint-Petersburg¹¹.

¹¹ “Gazprom Export's Gas Auction Finalized”, 10 September 2015, <http://www.gazpromexport.ru/en/presscenter/press/1689/> (last visited April 21st 2016); “Gazprom Export's Gas Auction for the Baltic States Completed”, 18 March 2016, <http://www.gazpromexport.ru/en/presscenter/news/1782/> (last visited April 21st 2016)



(Figure 3)

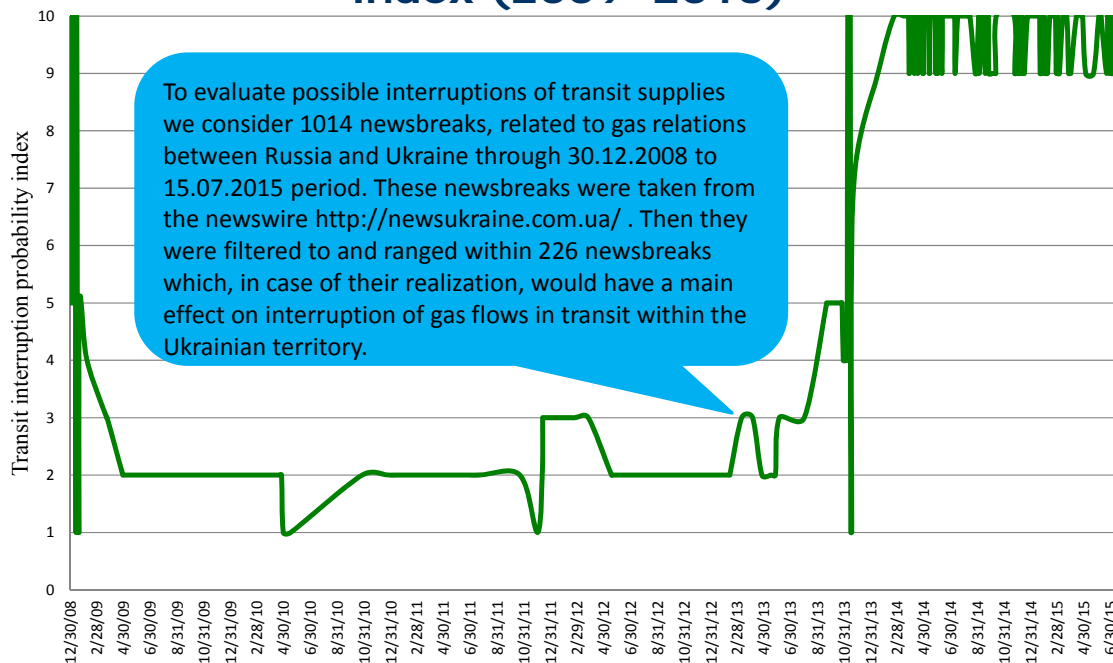
3. Ukrainian transit risks – and the EU position

As is well known, each sovereign state has its sovereign rights. An importing state (e.g. of EU) has its sovereign right to define its targeted fuel mix, the level of state support for alternative fuels (e.g. RES), the architecture of its energy markets, etc. thus changing risks and uncertainties for other players within the cross-border gas value chain. A resource-owning state – or energy exporter (e.g. Russia) - has its sovereign right to define end-market-related (to EU) and/or transit-state-related (via Ukraine) risks and uncertainties (like non-delivery risk) to best effectively fulfill its supply obligations within the cross-border gas value chain.

To quantify evolving transit risks, the author has developed, with M. Larionova, his Master student at the Russian State Gubkin Oil & Gas University, a methodology for a “transit interruption probability” index calculation based on the principles of credit ratings evaluation by major international credit agencies. Calculations of such an index for Ukraine for 2009–2015 showed (Figure 4) that since early-2014 it has been steadily standing on the highest possible level. Russia and Ukraine cannot solve their gas-related issues bilaterally, since at least one party (Ukraine) demands a third party (EU) involvement as mediator/conciliator for searching temporary compromises between the two. This very fact means Ukraine’s systematic mistrust to contractual partner which by itself creates extra transit risks and uncertainties for Russia. Moreover, Ukraine has been in a state of civil war, but it considers Russia as an invader and in the most recent “State Military Doctrine” the current Ukraine

authorities has announced Russia as its major military enemy.¹² This, from my view, adds to the permanent transit risk for the supplier since it is his responsibility to provide timely delivery of contracted supply volumes to delivery points deep inside the EU, non-dependent his problems with transit states.

Figure 4. Ukraine: “transit interruption probability” index (2009–2015)



To evaluate possible interruptions of transit supplies we consider 1014 newsbreaks, related to gas relations between Russia and Ukraine through 30.12.2008 to 15.07.2015 period. These newsbreaks were taken from the newswire <http://newsukraine.com.ua/>. Then they were filtered to and ranged within 226 newsbreaks which, in case of their realization, would have a main effect on interruption of gas flows in transit within the Ukrainian territory.

Calculated by M.Larionova, Russian Gubkin State Oil & Gas University, Chair “International Oil & Gas Business”, Master’s programme 2013-2015, on methodology, jointly developed with A.Konoplyanik, based on principles of credit ratings evaluation by major international credit agencies

(Figure 4)

So it is a sovereign right of a resource owning state (Russia) and/or its export agent (Gazprom) to evaluate such transit risks and undertake adequate measures for its mitigation, including development of by-passes as risk-avoidance pipelines. In an unbundled gas world there is no obligation for an exporter to stay with the same transportation/transit route for a given supply contract after expiration of its transportation/transit component. This is why Russia has announced its endeavor not to prolong its transit contract with Ukraine after its expiration in 2019¹³ and to develop alternative routes by-passing Ukraine (risk-avoidance pipelines) for timely deliveries of existing contractual volumes of gas to the EU.

¹² "Press release subsequent to the results of the meeting of National Security and Defense Council of Ukraine - National Security and Defense Council of Ukraine" dated September 9th 2015, www.rnbo.gov.ua/en/news/2253.html. Last visited 11 November 2015
¹³ "Russia Won't Renew Gas Contract With Ukraine" July 25th 2015, <http://www.forbes.com/sites/kenrapoza/2015/07/25/russia-wont-renew-gas-contract-with-ukraine/>. (Last visited 11 November 2015)

Nevertheless, the EU (e.g. European Commission) has stated multiple times its support for the continuation of Russian gas transit via Ukraine post-2019¹⁴. (It seems that) this is the real reason why the EU opposes redirection of Russian gas supplies to new transportation routes to EU post-2019. But (it also seems that) the Commission's support for existing and future transit of Russian gas via Ukraine is not the end, but just the means.

The real goal seems to be two-fold. Firstly, to provide Ukraine with steady post-2019 financial flow of transit revenues from the Russian gas supply contracts to the EU via Ukraine (despite the currently “unfriendly” to Russia political regime in this transit state) instead of donating corresponding financial aid to Ukraine (currently politically “friendly” to the EU) by the EU itself.

Secondly, to secure a prospective (if any) financing and guaranteeing pay-back of investment by international consortia of Ukrainian, European and American investors in the modernization of the Ukrainian gas transportation system (UGTS). The legal background for this consortia was established by the Ukrainian Law 4116-a “On alteration of some Ukrainian laws on reforming of management system of single gas transportation system of Ukraine”, which Ukrainian President P. Poroshenko signed 08.09.2014¹⁵. The law stipulates modernization and exploitation of Ukrainian GTS “jointly with European and American partners”.

Participation of Russian companies in consortium is forbidden by Ukrainian law, but the only way to make a consortium financeable is to guarantee transit of Russian gas through a Ukrainian GTS, either under the existing supply formula (Russian gas supplies directly to inside the EU through Ukraine in which case Russia will continue taking transit risk via Ukraine which it assess as unacceptably high – see Figure 4), or by a new formula unofficially proposed by the Commission: delivery of Russian gas at Russia-Ukraine border. In the latter case, either EU companies will take the transit risk via Ukraine by themselves (which they are not willing to do yet), or whether it will be there a possible role for *de facto EU Single Purchasing Agency* indirectly mentioned in the Energy Union Package? [“...options for voluntarily demand aggregation mechanisms for collective purchase of gas during a crisis and where Member States are dependent on a single supplier”]?

One other reason refers to Ukraine's participation in the Energy Community Treaty and its obligation, through this participation, to apply domestically the rules of EU *energy acquis*. This means, that after 2019, when the existing 10-year-long transit contract will expire, Ukraine will be required to comply with the Third Energy Package rules with regards to new transportation routes for Russian gas supplies to the EU through Ukraine. In this case Ukraine will be considered a “market zone” with “entry-exit tariffs”. The operator of the UGTS will be the above-mentioned international consortia. So the tariffs will include all the costs of “modernization and exploitation of Ukrainian GTS “jointly with European and American partners”” and thus will be much higher than the current ones.

¹⁴ See, for instance: «Шевчович считает транзит газа через Украину ключевым для ЕС» (“Shevchovic considers gas transit through Ukraine to be the key for EU”); 18.08.2015; http://remonttrubon.my1.ru/news/shevchovich_schitaet_tranzit_gaza_cherez_ukrainu_kljuhevym_dlja_es/2015-08-18-42 (last visited 21 April 2016)

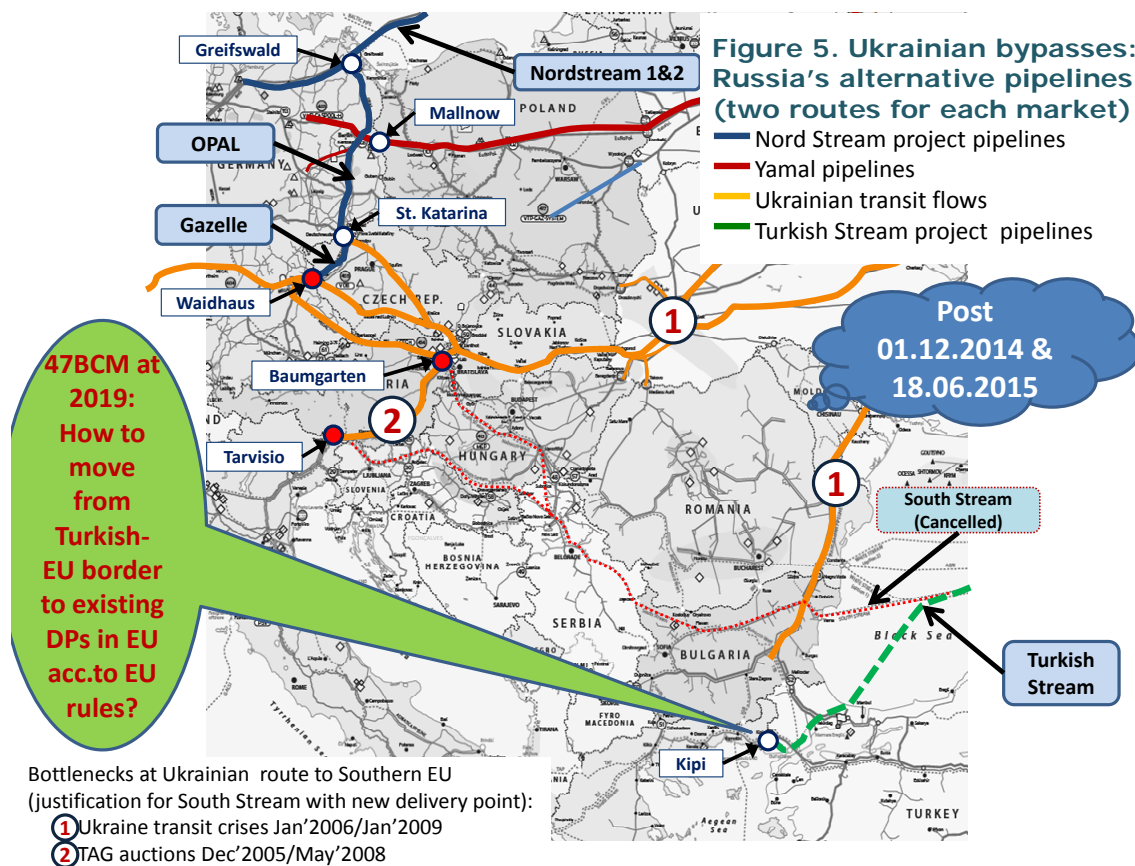
¹⁵ «Порошенко подписал закон, «на шару отдающий американцам» ГТС Украины» (“Poroshenko has signed the law which ‘gives off chance to the Americans’ GTS of Ukraine”), 08.09.2014; <http://www.regnum.ru/news/1844923.html> (last visited 21 April 2016)

So, not only the transit risks will remain high under the current political situation, but also the transit costs will increase for Russian gas through Ukraine if transit were to continue after 2019.

So, Russian/Gazprom’s decision for alternative pipelines is aimed, inter alia, to diminish supply risks to the EU as a result from future risk of Ukrainian transit of Russian gas. Nevertheless, the EU supports continuation of the more risky option for the EU supply.

4. Diversity of pipelines routes: “multiple pipelines” concept for EU

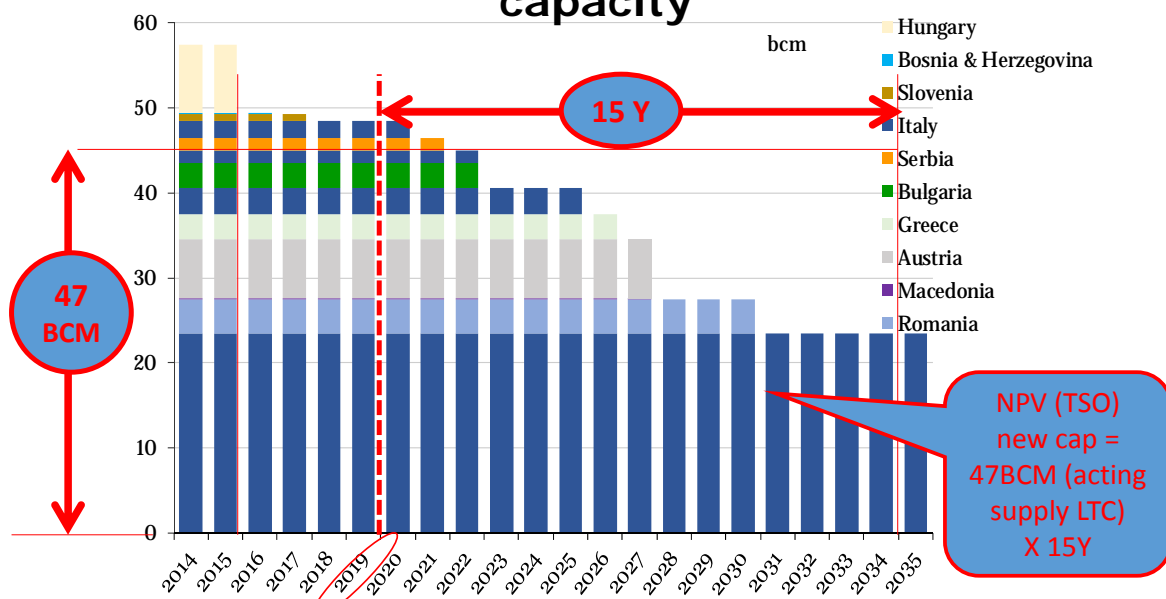
On December 1st 2014 Russian President V. Putin announced in Istanbul that Russia cancelled the “South Stream” gas pipeline project and would develop instead a new pipeline to the EU. The same day, Gazprom CEO A. Miller signed a MoU for a “Turkish Stream” project which was to land onshore at Turkey’s Black Sea coast with the same capacity of 63 BCM in four pipes as the former “South Stream”. 16 BCM were to stay in Turkey and 47 BCM to be delivered to the Turkish-Greek border (Figure 5). This gas covers the existing gas supply contracts to the EU which were to be rerouted from the Ukrainian transit route to this “Turkish Stream” post-2019. This is why this gas needs to be delivered partly to SEE states but mostly to the Central European Gas Hub in Baumgarten. Contrary to the “South Stream”, the onshore section of “Turkish Stream” was to be developed in full compliance with the Third Energy Package rules. This means that Gazprom will act only as a shipper inside the EU and it is expected that its demand for new capacity will be covered in full by the corresponding TSOs of SEE states.



(Figure 5)

An important question is how the required capacity would have been developed and when it could have been available? Today there are two ways to develop new transportation capacities within the EU: (i) based on “exemptions route” (Art. 36 of the Third EU Gas Directive) and (ii) through combined Ten-Year Network Development Plan (TYNDP) and “projects of common interest” (PCI) procedure. Neither one of those is the best choice for non-EU gas suppliers to the EU. The first one requires individual concessions by regulatory bodies from existing regulatory rules (too risky an option for long-term investments per se with such negative precedents as the Ostsee-Pipeline-Anbindungsleitung (OPAL) case). The second one is aimed to provide access for new capacity projects to limited EU public funding, which was not the case for prolongation of “Turkish Stream” inside the EU. Since it is based on rerouting from the Ukrainian transit to the SEE of existing supply contracts with delivery points mostly in Baumgarten (some of which last till 2035), booking of new transportation capacity (with all corresponding EU rules like “ship-and/or-pay”, “use-it-or-loose-it” (UIOLI), etc.) provides the best effective financial guarantees for TSOs to raise market-based international debt financing with the least risky repayment prospects to develop such capacity. There will be no need for a TSO to apply for limited EU public funds through a lengthy PCI procedure – the net present value (NPV) of the prospective bookings, which are allowed for 15 years onward, will justify raising necessary debt finance worldwide (Figure 6).

Figure 6. Russian gas supply contracts to Central & South-Eastern EU with UA transit till 2035 = 100% security for TSO project financing of new capacity



Source: calculated by E.Orlova (FIEF) based on based on: “Turkish stream”: Scenarios of by-passing Ukraine and barriers of European Commission”. Vygon Consulting, June 2015 (fig.4, p.30).

(Figure 6)

The third avenue to develop new capacity in the EU is in the making. Art.13.2 of the Third EU Gas Directive (Directive 2009/73/EC of the European Parliament and of the Council of 13 July 2009 concerning common rules for the internal market in natural gas and repealing

Directive 2003/55/EC) presents an economically justified formula which says that “Each transmission system operator shall build sufficient cross-border capacity to integrate European transmission infrastructure accommodating all economically reasonable and technically feasible demands for capacity and taking into account security of gas supply.” If in short, this means that if there is market demand for new transportation capacity, TSO shall invest and develop it.

Based on this formula, ENTSOG, under the request of the Commission (DG ENERGY) and with active participation of the market players, including from Russia/Gazprom Group as one of the key users of European GTS, has developed in 2014-2015 an additional section to the Capacity Allocation Mechanism Network Code (CAM NC) regarding incremental capacity (Amendment Proposal to “Commission regulation (EU) No 984/2013 of 14 October 2013 establishing a Network Code on Capacity Allocation Mechanisms in Gas Transmission Systems and supplementing Regulation (EC) No 715/2009 of the European Parliament and of the Council”). As stated by ACER, “the draft amendment proposal provides a new regulatory framework to offer incremental capacity in a market-based manner and shall satisfy demand that goes beyond the existing capacity offers, to ensure the necessary level of investment efficiently and in a financially viable manner”.

Participation in the ACER Public Consultation on the revised ENTSOG proposal for Incremental Capacity to amend the CAM NC, which ended 31 August 2015, has shown to the author that this Amended Regulation seems to provide a reasonable procedure for developing new capacity (though only its first practical application can test validity of such expectation). For new capacity at single interconnection points (IP) the default procedure is an auction. But for the cross-border new capacity (demand for capacity at more than 2 IP or conditional demand for capacity) the “alternative capacity allocation mechanism” is developed (Article 20(d)) which is much close to “coordinated open season” procedure that Russian/Gazprom Group experts, including this author, have been arguing for during not only the ENTSOG drafting process in 2014-2015 (to which two of us were invited as Prime Movers), but even much earlier within the Russia-EU Gas Advisory Council (GAC) since its establishment in 2011, and even during preceding the GAC creation Russia-EU informal consultations on gas regulatory issues since early 2010. In my view, this “alternative capacity allocation mechanism” is the preferable way for developing new cross-border transportation capacity compared to two other available procedures and could have been a workable avenue for an extension of the “Turkish Stream” onshore to the EU.

Unfortunately, it is clear for me that before 2019 it might not be possible to develop all of the required new capacity for the 47 BCM from the new entry point to the EU at the Turkish-EU border to existing delivery points, mostly in Baumgarten. And the political EU opposition to alternative (risk-avoidance) pipelines bypassing Ukraine does not speed up the process. So, for some time, and for some volumes of Russian contracted gas, supplies to the EU transitted through Ukraine will remain to be needed. This provides clarity for those who could not put together the long stated intention of Russian authorities not to prolong existing transit

contract with Ukraine post-2019, on the one hand, and the order of President V. Putin in end-June 2015 to Gazprom to negotiate rules and conditions of post-2019 transit through Ukraine, on the other.

Further to the opposition of the EU political authorities to the “Turkish Stream” project (despite the fact that it was stated that this one, contrary to the former “South Stream”, would be developed onshore the EU in full compliance with the EU *energy acquis*), one of the other key obstacles for speedy development of the “Turkish Stream” offshore (which is a necessary precondition for its extension onshore) was the policy of Turkey which had bundled negotiations on “Turkish Stream” transportation contract with the gas price level in a new supply contract of Russian gas to Turkey (contrary to the absence of direct economic correlation between the two, especially in the unbundled internal gas market of the EU to which Turkey has been long aiming to accede and thus would need to get acquainted to play according to its rules) thus putting this Ukrainian by-pass in dependence on success of its pressure on Russia regarding the value of gas price discount.

This is why on 18.06.2015 the creation of Nordstream-2 project was announced which establishing documents between Gazprom, BASF, E.ON, ENGIE, OMV and Shell were signed early September in Russian Vladivostok¹⁶.

And this is also why, from my personal opinion, it is not impossible to expect that, until the corresponding legal documents are signed, at least some of the four pipes of offshore section of “Turkish Stream” might end also in Bulgaria, as was earlier planned for the whole “South Stream”. Though if this will happen, the rules onshore EU for updated “Turkish Stream” will be different from those that Russia/Gazprom were fighting for in the “South Stream” case, i.e. in full compliance with the EU *energy acquis*. This is why Russia/Gazprom Group experts, including this author, were so active in their collaboration with ENTSOG, ACER and DG ENERGY on development CAM NC INC to make it best financeable and manageable non-dependent of the final route of new alternative pipelines to the EU.

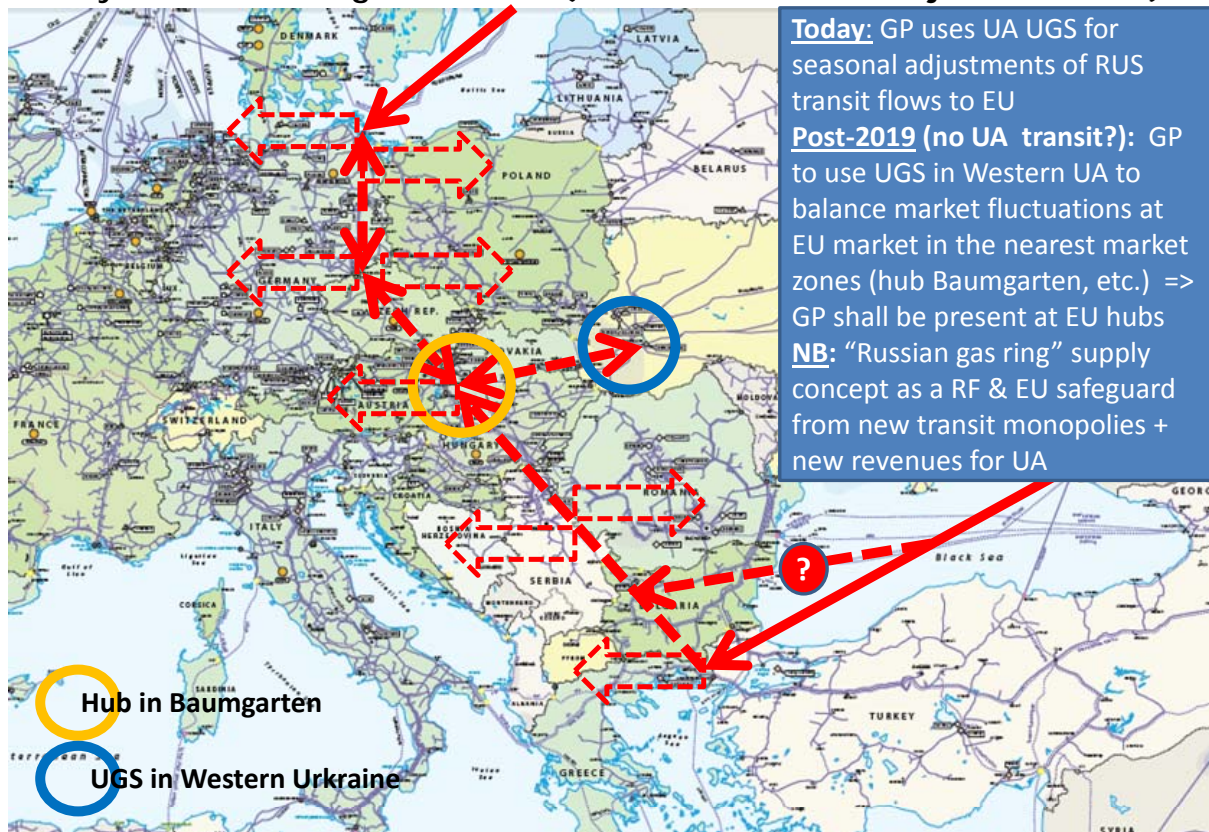
In the meantime, within Work Stream 2 (WS2) “Internal Markets” of GAC we have proposed to organize a joint “pilot test” (case study) for testing Art.20(d) procedure for either “Turkish Stream” or for Nordstream-2 extension onshore EU before this Amended Regulation will pass through comitology procedure and will come into force sometime, possibly, in late 2017. This idea was supported by ENTSOG and the work of joint “Reality check” working group on “realistic case” in NWE is currently under way under management of ENTSOG team and with participation of TSOs. We are testing implementation of the CAM NC INC based on “as if” approach with the aim to provide results of this test for current comitology procedure on CAM NC INC.

¹⁶ "Gazprom, BASF, E.ON, ENGIE, OMV and Shell Sign Shareholders' Agreement on the Nord Stream 2 Project" dated September 4th 2015, <http://www.nord-stream2.com/press-info/news/gazprom-basf-e-on-engie-omv-and-shell-sign-shareholders-agreement-on-the-nord-stream-2-project-2/>

5. “Russian gas ring” in Europe

One of the positive consequences for Russia, EU and – surprise-surprise! – for Ukraine as well of the development of both Southern (Turkish (?) Stream) and Northern (Nordstreams) Ukrainian by-passes is the possibility to organize “Russian gas ring” for European gas deliveries (Figure 7). Maybe (whether) EU will change then its opposition to Ukrainian by-passes if it will see alternative means for Ukraine to earn money by UGTS instead of gas transit revenues? “Russian gas ring” will provide such opportunities.

Figure 7. Russian gas ring diminishes UA transit risk & presents a non-transit way for UA to raise gas revenues (thus covers issue of major EU concern)



(Figure 7)

The EU Gas Target Model based on the provisions of the Third Energy Package stipulates the trade at the hubs, the latter aims to be liquid (which is not yet the case for most of the EU hubs). A growing presence at the hubs is also within the justified economic interests of Gazprom as a key non-EU gas supplier to the EU.

For hubs to be liquid they need to have close links with neighboring UGS since the mechanism of obtaining supply flexibility under spot trade is very different from LTC. In the case of LTC supply, flexibility is provided from within the contract itself, which means that LTC is *de facto* not just a supply contract, but both a supply and service contract simultaneously, since LTC provides to the buyer a commodity with volume and price, and on top of this also with the flexibility of supply within the timeframe through the flexible nominations right for the buyer. In total – three major values per contract.

In case of spot trade, with a fixed volume and price for every transaction (in total – two major values per contract), supply flexibility can be obtained only from the market - either through regular contractual oversupply (which has been the case for Russian gas with high TOP post-2009) or through steady connection with UGS.

Expanded trade at the hub in Baumgarten (due to increased presence, inter alia, of the Russian gas in spot segment of EU gas market) will require the increasing regular use of UGS to balance market fluctuations. This is the challenge for the expanded role for Western Ukrainian UGS in different, compared to current, manner of their use. Today UGS in Western Ukraine are used mostly for seasonal adjustment of Russian gas transit flows to the EU. With a growing presence of Russian gas at the hub in Baumgarten these UGS (together with other UGS in EU where Russia/Gazprom has its owned/rented capacities) can be used to adjust market fluctuations at the hub in Baumgarten (and/or at other neighboring future hubs, if any). This means that if the price at the hub is too low, gas can be injected into the UGS, while when the hub price is high, it can be extracted from the UGS and traded at the hub. This will enable the Ukrainian UGS in Western Ukraine to operate on a permanent basis with a flexible regime in line with market fluctuations. This, in turn, will increase bi-directional utilization of Slovak GTS.

So, Ukraine might earn money with its UGTS without the transit of Russian gas – more intensive utilization of its UGS will compensate or at least soften the absence of transit revenues post-2019. Plus Ukraine will thus further integrate into the EU energy system. The EU will not need to finance Ukraine from its own public funds, or at least will face a diminished demand for such financing. But for this, Gazprom shall be not prevented to be present at the EU gas hubs (see Figure 2-B).

The Russian gas ring eliminates Ukraine transit risk and presents a non-transit way for Ukraine to raise gas-related revenues which addresses the issue of major EU concern. Thus the “Russian gas ring” supply concept can act as a safeguard for Russia and the EU from new transit monopolies and will generate a new source of market-based financial revenues for Ukraine from its GTS.

6. Specificity of Russia’s “multiple pipelines” concept in Asia Pacific

Russian “multiple pipeline” concept in gas has its specific features for Asia Pacific which differs if from the particularities of implementation of the same concept in Europe. First of all, the very fact of looking at the East with future energy supplies means only one aspect of multidimensional “diversification”: diversification of export markets. Russia would like to establish in the future a triangle of interconnected markets: a domestic one and two export ones – European and Asian – with reasonable flexibility of supplies to each of them within contractual obligations.

Another aspect of diversification, in case of access to Asian gas market, is diversifying of means of supply. Russia is testing comparative advantages of both pipeline gas and LNG supplies to Asia.

In both cases Russia is testing a “multiple supplies” concept which means that different pipeline and LNG options are examined in their competitive coexistence (Figure 8). From my view, it is not necessary to expect that all Russian Asia-oriented export pipeline and/or LNG projects, which are discussed today in the public domain, will be finally implemented. In

result of this internal debate the best effective configuration of already existing projects (such as “Sila Sibiri-1” Gazprom’s gas pipeline to China, acting LNG plant in “Sakhalin-2” PSA project of Gazprom-Shell-Mitsui-Mitsubishi consortia), those projects that have passed “no return” point of final investment decision (FID) and are being developed (such as the “Yamal LNG” project of Novatek), and those projects that are being discussed but have not yet passed “no return” point of legally binding agreements/contracts and FID (such as “Altai” pipeline or extension of Sakhalin-Khabarovsk-Vladivostok pipeline, both Gazprom’s pipelines to China; such LNG projects as expansion of “Sakhalin-2” LNG plant, Rosneft-Exxon proposed LNG plant within “Sakhalin-1” PSA project, Gazprom’s “Vladivostok LNG” plant) will be decided with the active role of the resource owner (Russian state) in developing a balanced decision.

Figure 8. Russia & Europe *in the past* vs Russia & Europe & Asia *in the future* (new factual Russia’s gas export model)



(Figure 8)

The next aspect is diversity of suppliers. This is a new phenomenon in Russia which appeared with the development of domestic LNG projects. Gazprom’s pipeline gas export monopoly is established and protected by law and is aimed to exclude gas-to-gas competition between different potential Russian pipeline exporters to the historical European export market. In case of pipeline gas export liberalization, this would have diminished marketable gas export price and thus mineral resource rent collection. Maximization of the latter is the historically agreed sovereign right of the sovereign state (UN General Assembly Resolution 1803 as of Dec.1962) and Gazprom is just a state agent to fulfill this task at the best of its ability. Regarding LNG as a new gas business segment in Russia, which supplies are global by nature, the risk of gas-to-gas competition with pipeline gas are lower. This is why by

liberalization of the LNG business Russia aims to enter this speedy growing segment of international gas export activities more actively.

To summarize: The Russian gas export policy is at the stage of a multidimensional adaptation to new realities in its major markets: in the currently major (though stagnating and presenting new risks and uncertainties for Russian supplies) European gas market and in the prospective and growing in importance (due to its scale and growth rates) Asian one. The search for a new balance (with the long-standing permanent aim to maximize mineral resource rent collection for the sovereign state) is “a long and winding road” (the Beatles). But this will be a steady ongoing process for Gazprom.

N.B. Part 1 of the article explains this author’s vision of “alternative pipelines” concept and its evolution prior to November 24th, 2015. How this concept was/can be further adapted after 24.11.2015 and why this date does matter will be discussed in Part 2 of this article.

(to be continued)

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