

28th round of Informal Russia-EU Consultations on EU Regulatory Topics

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21st meeting of the EU-Russia Gas Advisory Council's Work Stream on Internal Market Issues (WS2 GAC)

21 October 2016

Gazprom Export

(2a, Ostrovskogo Sqr., Litera A, Saint Petersburg, Russia)

MINUTES

The agenda and list of participants are attached to the Minutes.

1. Greetings / Opening remarks by Co-Chairmen

The Co-Chairs Mr. Medvedev (Consultations), Mr. Boltz (WS2 GAC/Consultations) and Mr. Konoplyanik (WS2 GAC) welcomed the participants.

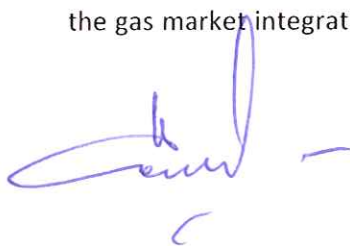
Mr. Medvedev opened the Consultations and welcomed the group saying that he is pleased to host such a "critical mass" of participants from both sides at the "Gazprom export" premises to discuss all the relevant and sensitive topics on agenda, and he wished that discussion will go effectively, as traditionally experienced within this grouping.

Mr. Boltz noted that during the last months the work has further improved in the sense that some topics that are quite relevant are being discussed now, and in the last few months Work Stream 2 of the Gas Advisory Council has contributed to the EU legislative procedure. He concluded by saying that this meeting will give a start to discussions on a number of new topics that will "fill up" the agenda for the next months.

Mr. Konoplyanik welcomed the participants at their first meeting at the Gazprom export premises. He has echoed Mr. Boltz by saying that it was a mutual decision of the parties to add some new sensitive issues to the agenda of this Work Stream since the major part of its most recent activities has been aimed at the CAM NC INC and TAR NC developments which now has come to its logical finalization with the Comitology procedure. Then he read the letter from ACER dated 20.10.2016 informing that a new ACER Board of Appeal takes office and that one of the six new appointed members is Mr. Boltz. The WS2 members congratulated Mr. Boltz on the new position.

2. Results of the Madrid Forum

Mr. Ingwersen (ENTSOG) underlined the key points made at the Madrid Forum. One of the remarkable points at the Forum was the report that the EU gas market is improving – though still with 'pockets' where further improvements should be made. ACER has issued the first Market Monitoring Report applying the metrics introduced in 2015. A general understanding is that the European gas market is on good track (trading at hubs etc.). There are still some areas that need to be worked on: Network Codes implementation is not fully on schedule in all member states, and for the next year ACER will focus on identifying barriers for further progress of the gas market integration. The EU Commission is expected to issue a study on gas market design in the first half

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of 2017. This study will go deeper in analyzing how the market is working, identification of still outstanding issues and what could be done in this regard.

At the Madrid Forum the European Commission announced that the Gas Regulation will be re-opened in 2017, partly in the light of the announced study and partly due to expected changes in governance and procedures initiated by problems within the electricity sector. It was emphasized by the European Commission that it's neither about big changes for gas, nor revolutions in the gas market model, but rather adjustments regarding effective operation. Gas NCs have delivered results but still some changes will take place in order to ensure similarity in electricity and gas processes and governance. Stakeholders at the Madrid Forum did express that the gas regulatory framework "works quite well" and does not need major amendments, and suggested that maybe the electricity market could learn from gas in certain aspects, and not the gas sector be exposed to changes due to challenges in the electricity sector,. The expectation is that the Winter Package will contain a number of EU Regulations on the security of gas supply and the electricity market. Publication is expected for late November-early December. This Package will include procedures and governance proposals that can also affect the gas side even if it is drafted for electricity in the first place.

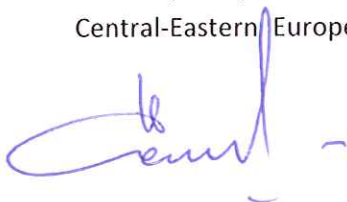
Another topic that was discussed in Madrid is gas quality. Last year ENTSOG was tasked to analyse whether to amend the Interoperability Network Code and to include EU CEN gas quality standards. The workshops/consultations by ENTSOG have shown that stakeholders are reluctant to mandatory application of these standards. The European Commission concluded that there will be no amendment on gas quality and they will stop any further legislative work on this so far. The European Commission asked ENTSOG to finalize its work on consultation, workshop and reporting, but this will not result in a proposal for amendments in the corresponding NC.

The final topic: 'demand-supply issues' was presented partly by IEA and partly by ENTSOG and there was also input from Eurogas. IEA, ENTSOG and Eurogas presented scenarios for the upcoming years showing different results regarding EU gas market development. There is a strong push for CO₂ emission reduction scenarios, also with low gas demand. IEA scenarios show a strong decrease in demand. ENTSOG scenarios are in general more optimistic on the gas side than those of IEA. ENTSOG and GIE are supporting a strong role for gas and gas infrastructure in the future, but are also showing scenarios where the gas infrastructure is supporting the EU climate agenda.

Mr. Konoplyanik pointed out that the Gas Advisory Council tries to identify relevant issues and achieve more transparency. Mr. Konoplyanik asked whether Mr. Ingwersen saw some issues/items based on the results of the recent Madrid Forum that might be considered as potential topics for the WS2/Consultations Agenda in the upcoming future.

Mr. Ingwersen responded that CAM NC INC Reality Check/test has been a good example, especially considering that WS2 had developed the operational methodology to test how it actually works, so it could represent a way to work on future topics as well (monitoring of functionality of the upcoming EU Regulations). Another item is demand-supply scenarios (the work that has been usually done by WS1). The reality of European political discussions on scenarios is such that the gas industry as a whole would benefit from the discussion if CO₂ concerns are addressed, since gas can and will play a very important role in climate agenda. The gas industry should be able to demonstrate ways to achieve CO₂ reduction goals with expansion of the use of gas and gas infrastructure.

Mr. Kamphues (ENTSOG) added that we need to discuss the procedures on how to change the existing Network Codes. For the time being no new NCs are foreseen, and therefore the first priority should be to concentrate on implementation and/or changes/amendments of existing Codes based on the results of their implementation, but currently the procedure on how to change them is not very clear. It may also be reflected that the priorities in Central-Eastern Europe (CEE) could be different from the priorities in North-West Europe (NWE). It is also



important to recognize that ENTSG has a role in providing technical/legal expert advice in the EU context, but is not to be considered as a lobbying organization like GIE.

One more issue: The electricity sector (ENTSO-E) may see the future as digital, electrical, but the gas sector does not fully agree. The energy sector cannot change so much in short period of time, gas is important, and it is necessary to cooperate with electricity. The new task is to explain that in practice (despite theoretical, not practical, scenarios of overall "electrical" world) gas plays an important role, and that there is a very long way to go, and reasonable compromise "gas-electric" scenarios are needed in discussions with ENTSO-E.

Mr. Solheim shared the views of Mr. Kampues and Mr. Ingwersen regarding the (no-) need of more NCs. The consumption of gas in the next years in the EU tends to decline by 15% (IEA expected decline in consumption), therefore investment needs to be taken with additional care and consideration. If the costs of auctions are not covered, the position of regulators is that it should be paid by increased tariffs. From Mr. Solheim's point of view, no new infrastructure should be built in order to not overpay for it since it will be end-user who will pay for this. Socialization of costs means that shippers are to pay higher tariffs.

Mr. Boltz mentioned that the role of gas in Europe seems to be seen very differently from the inside and the outside of the gas industry. The gas industry thinks that the supply will be high and everything will be ok, but outside of the gas industry it is perceived that gas will be phased out. Somehow, the gas industry might have overlooked that outside of the industry it was already shown how the world without gas will look like. The challenge of the gas industry is to make sure that public perception of gas is correct. Mr. Boltz mentioned a strong phenomenon: there are studies how the world without gas would look like, but there are almost no studies on how the future without, e.g. renewables or coal would look like or nothing about how an environmentally friendly future with gas would look like. It is a big problem because the wider public and policy makers don't understand the details of challenges in the gas industry in the next 3-5 years to put the future right in every detail. The picture with CO₂ emissions and renewables without gas is wrong.

Mr. Konoplyanik asked about possible reasons behind publications describing a "future without gas". He underlined that at previous WS2/Consultations' meetings the issue of "carbon track" and results of the analysis of the publications on this issue that intended to prove the argumentations of the future without gas were on the agenda. Sometimes these publications, as was demonstrated, appear to be incorrect and continuing examination of this issue in the future work of WS2/Consultations seems necessary. What are the main drivers for these publications: proved reality based on economic considerations or political motivation? If the reason is political motivation, what can change this political perception of the "future without gas"? When we speak about European publications of the "future without gas" whether the perception is not simply the political perception of the "future without Russian gas"?

Mr. Boltz answered that two forces were coming together. One "force" is that expansion of renewables is a huge new business. All across Europe, companies engage in this process. This is very important on the political agenda, RES receive all the money from political decisions. But for now RES only survive because they have excellent political lobbying for new entrance, economically they are very expensive. CO₂ emission policy is more for coal, in the gas sphere Europe is going in the right direction. But gas, as incumbent industry compared to RES, has overestimated positive economic consequences of gas and has considered that they will speak for themselves. Thus gas has lost competition between two lobbying parties: incumbents (gas) and new entrants (RES), while in the EU new energy entrants received from the very beginning additional sympathies.

Another "force" is the security of supply issue with Russian gas. These issues come together to reinforce each other. However, the effect of this is that in fact Europe has more coal than gas, which has a bad environmental effect. In the end, Mr. Boltz believes that it's important for the EU to have a balanced market: with renewables



and gas. This is quite a structural issue and gas industry has to work on it in the future years. A common priority is to have a more complete and realistic picture of the energy market in Europe in the future.

Mr. Konoplyanik has commented on this that it would be more effective and productive to (and maybe will be a topic for further consideration) to pay more attention of the public to “gas vs new energy industries” economic competition and to increase such political lobbying rather than to stay within “Russian gas vs other (non-Russian) gas” political perceptions.

3. EU draft legislation on Incremental capacity (TAR and CAM NC):

a. Final results of the ENTSOG-managed “Reality check” of Incremental process

Mr. Vitovsky (ENTSOG) reported that the work was initiated by a proposal of the Gas Advisory Council WS 2 meeting in January 2016 to test the procedure of the incremental process that is part of the CAM NC. It was agreed to develop an understanding of the incremental process with the focus on the Articles on the alternative allocation mechanism to test the incremental process on a virtual but realistic case. A virtual project from the Netherlands through Belgium to France was selected for this “Reality check” in order to test the procedure on the realistic numbers. The improvements were identified and reported to the European Commission in order to make the incremental proposal within the CAM NC better and workable. The work started in February 2016 and the Reality Check Work Group on Incremental process (INC RC WG) delivered its inputs to the European Commission from April to September 2016.

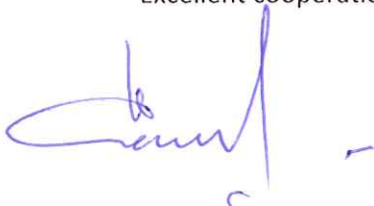
Mr. Vitovsky also pointed out some details about the organization of the INC RC WG. 16 TSOs participated in the “Reality check” process. Gazprom/Gazprom Export (who have initiated the “Reality check” process to WS2) were also invited to participate in it within the group of “prime movers” of CAM NC INC development. The European Commission didn’t participate actively in INC RC WG but was present as an observer. From February 2016 to September 2016 there were 12 work group meetings. The WG has already two times reported its findings at previous WS2 meetings. This is the final report of the Reality check group since it has delivered its result to the comitology process on CAM NC INC.

Mr. Vitovsky presented the recommendations based on the discussions within the Work Group. During the work 9 points were identified and suggested to the European Commission for amendment. 7 recommendations of the WG were taken up by DG ENER: clarification booking horizon for the existing and incremental capacity; absence of/late NRA decisions; introduction of auctions as a “fallback” from alternative allocation mechanism; improved definition of alternative allocation mechanism; application of fixed price (tariff); risk of hampering the incremental process due to the intermediary annual auction; flexibility in setting level of mandatory minimum premium. There were two points proposed by “Reality check” group where DG ENER did not follow INC RC WG’s recommendation: transitional arrangements for the existing projects on the incremental/new capacity and short-time 20% quota of incremental capacity. However, during the final Gas committee meeting on the CAM NC, EU member state representatives were in favour of changing the quota in the way suggested by INC RC WG.

The current situation is that the CAM NC, including the incremental proposal, has been approved on October 13 2016 at the Gas Committee by the EU member state representatives and the articles about the transitional arrangements and short-time 20% quota have been amended in the way how the “Reality check” WG and TSOs suggested. It means that all the recommendations of the WG have been implemented to the final version of the CAM NC. This is a great success for the INC RC WG.

Mr. Vitovsky also outlined four main elements that have contributed to the success of the INC RC WG:

- Excellent cooperation between TSOs and stakeholders on expert level,



- Representative realistic case (virtual INC project) to unveil problems and solutions provided by the Network Code,
- Mature version the NC to be checked against reality,
- Balanced view of interests (TSOs, different type of network users).

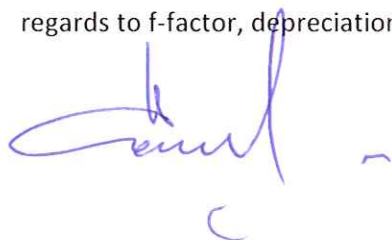
In general the INC Reality check was a great opportunity to gain insights for TSOs and stakeholders on future network codes.

Mr. L'Eglise (Fluxys Belgium) continued with a detailed step-by-step description of the "reality check" project. He started by reminding that the concept is realistic (based on the realistic figures), but is not real.

He then outlined the incremental process steps, based on a simplified visualization of how the incremental process looks like. The incremental process starts from the shippers' interest in incremental capacity, which might trigger the need to build new infrastructure. The annual auction for yearly capacity, which is held every year from the upcoming 15 years for the existing network also provides valuable information to compute the Demand Assessment Report (DAR). Every odd year, and particularly in July 2017, the DAR will be published by all concerned TSOs: they can conclude whether the incremental process needs to be further engaged or not. If the outcome is positive, the Design Phase starts. During the design phase the TSOs identify the necessary investment projects to answer the demand. The project identification means the physical side of the infrastructure, but also the contractual and economic aspects of it. After consultation with stakeholders, the proposal is submitted to the National Regulatory Authorities (NRA) for approval. Within this process, the TSOs can't indeed decide on themselves about such projects. After a period of approx. 6 months devoted to such approval, the binding phase – such as in the more classical "open seasons" - starts. This phase is the stage where TSOs offer the capacity for contracting. The CAM NC incremental process stops when there is a signed contract between the network users and the TSO.

In the realistic case, the demand consists of the valuable input from two types of network users. On the one hand, Gazprom did proxy long-term demand for a significant amount of gas, while on the other hand, industrial customers did proxy a demand for a smaller volume and shorter duration. When comparing the incremental demand with the existing infrastructure, bookings and usage rate, TSOs did identify 4 relevant offer levels, and the economic test in relation to each of those scenarios were analyzed. In his presentation Mr. L'Eglise further detailed the network reinforcement that are needed to create incremental capacity and the necessary elements of the economic tests for each case.

The economic test is essentially comparing the present value of the binding bids (present value of the user commitments taking quotas into account) with the cost of the project (present value of the increased allowed revenue). The one important thing here is f-factor: the economic test says that a project will be selected if the amount of money TSOs get from the contracts cover at least a fraction of the costs that are made for the investment. That fraction is the f-factor. It is the minimum proportion of the project cost that needs to be paid. If f-factor will be lower than 1, it means that part of the project cost will have to be paid by other network users or at the locations or at the different timing. The elements that are needed to calculate that economic test are: the reference price - calculated according to tariff methodology, f-factor, project costs and mandatory premium. For all those elements, assumptions on the contract of the incremental and existing capacity that will be contracted are needed. The results are presented based on a central case and several sensitivities on all those parameters. They highlight essentially, that the reality check is based on reusing an existing infrastructure, which allows a significantly lower amount of money to be invested (50% in the worst case) than in a totally greenfield project to transport an equivalent amount of gas (10 BCM) over an equivalent distance (1200+ km). They also highlight the expected effects of more or less socialization across the different types of users, depending on choices made with regards to f-factor, depreciation period or contract renewal assumptions.




Mr. Ischia (E-Control) questioned the application of the mandatory premium in the future auctions. The answer was that it is up to NRA to decide on application of the mandatory premium in the subsequent auctions, following the initial binding bid. Mr. Van Dijk (Gasunie) added that to gain as much market demand as possible, it would be logical to apply the mandatory premium in the future as well.

Mr. Krutko (Gazprom export) remarked that the Regulation does not necessarily make things easier: it makes projects longer (7-8 years from start to actual commissioning), therefore meaning that it is very hard to produce realistic assumptions about the market in such a long time. He added that the amendments to NC CAM are regulatory attempts to solve problems that were created by the Regulation itself. In the past, mutually acceptable agreements between shippers and TSOs were to be concluded regarding tariffs and conditions were applied, and with Incremental, it is broadly stays the same.

Ms. Zhur (Gazprom export) mentioned that this reality check is the first precedent of such a format and has proved to be very effective. The main achievements are: 1) introduction of the offer level concept; 2) booking horizon (initially 15, now up to 20 years), 3) fair price concept; 4) mandatory premium concept. The new legislation contains a lot of disclaimers that leave a lot of decisions to discretion of the NRA.

Mr. Timofeev (Gazprom export) added that this Regulation created "super-regulators": NRAs are required to make decisions in about 15 procedures. Such an overregulation is not something that helps the market. There is, from his perspective, a need to influence such a power of over-regulation and to liberalize market.

Mr. Dickel questioned how investments are supposed to work in those circumstances.

Mr. Poillion (GRTgaz) questioned about the long-term investments. The long-term investments are not usually needed (for example, in France), but is still very valuable.

Mr. Konoplyanik explained that the regulatory framework does not create space for effective management of investment, but we need to find compromise and balance interests of the market participants.

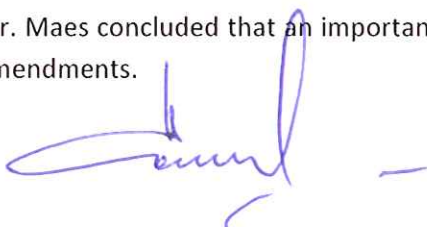
Mr. Krutko feedbacked that the incremental capacity will be needed in Europe, and Gazprom definitely will continue to develop the portfolio.

Mr. Boltz noted there was never a purpose to prevent TSO from constructing pipelines, but there was a lack of coordination in the past, and the incremental process is aimed at improving coordination between different TSOs, hence decreasing the cases for ineffective economic decisions.

b. Final CAM NC INC as approved by the Gas Committee on 13.10.2016

Mr. Maes (CREG) announced that there is a long history behind the development of CAM NC. Current CAM NC was adopted in 2013, and the amendment procedure had started immediately afterwards. The recent news are that on the Oct. 13 the EU members states in the comitology delivered the positive opinion on the new CAM NC. The impact of the EU-Russia dialogue is very impressive, final CAM and TAR NCs texts address many concerns raised by the Russian side. The result of the TAR and CAM NC is a reduction in regulatory discretion rather than a full harmonization; e.g. regarding tariffs: although there are general rules, there are possible deviations as well. In general the amendments to CAM NC and approval of TAR NC are a very big improvement, but the legislative work might continue. For NRAs, these codes will bring some more work to achieve the required transparency via consultations and publications, but they will also introduce a more structured way of working across Europe. It will be useful to know how TSOs and NRAs look on the same issues. In particular, on the TAR NC it's important to mention that many provisions are of substance, but maybe even more provisions concern procedural aspects (such as coordination between TSOs).

Mr. Maes concluded that an important milestone has been achieved by the adoption of the TAR NC and CAM NC amendments.



Mr. Kampues hoped that NRAs will at least consult their decisions with neighboring NRAs. In all international projects there is lack of NRAs' intention to cooperate. This is the gap that has to be overcome.

Mr. Konoplyanik mentioned that it is an internal EU problem, but probably one of the next GAC meetings could be devoted to searching solutions to solve this problem and understanding what can be done to improve cooperation between NRAs.

Mr. Kampues added that at this point ACER should take initiative. There needs to be harmonized implementation of the new legislation, but GAC participants cannot be of help for NRAs coordination process.

Mr. Konoplyanik answered that for this reason the representatives of the EU Commission and of ACER need to participate in the GAC meetings to further improve efficiency of Russia-EU and intra-EU cooperation.

4. Comparative results of three GPE gas auctions 2015-2016

Mr. Medvedev (Gazprom) gave a presentation on the gas auctions held by GPE in 2015-2016. The auctions serve as additional market instruments and are designed to test selling of additional volumes, selling at different locations with different price instruments and to develop seller's general sales conditions and customer network. The gas was sold with auctions not on the hubs, because the price was higher during the auctions. The auctions are the additional export instruments on the top of the Russian long-term contracts portfolio. The auctions were designed to test selling of the additional volumes at different delivery points, different markets. The Gazprom benchmark price will appear in the future.

Mr. Medvedev reported that Gazprom has organized three natural gas auctions for European consumers.

In the first auction (Sept. 2015) with the delivery period winter 2015-2016 the volume offered was 3,24 bcm, the volume sold was 1,2 bcm. The experience was successful since the new format of selling was tested, the volumes were bought at higher prices and contacts with new clients were established. The capacity through Germany to the Czech Rep. was tested during this auction to provide the argumentations for the European authorities to use 100% capacity of OPAL. The market showed no interest to OPAL at all except from Gazprom. The second auction (March 2016) for Baltic states resulted in selling approx. 3/4 of the volume offered. The third one (Sept. 2016) was for Western Europe with the delivery period winter 2016-2017. The interest for OPAL was tested again and received again no interest for OPAL with the exception from Gazprom.

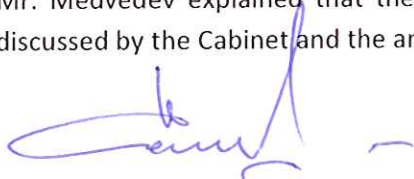
Mr. Medvedev concluded that Gazprom / GPE will continue to develop the auction system from different perspectives, including obtaining more information about market demand.

Mr. Solheim questioned how many companies participated in the auctions?

Mr. Medvedev answered that there are no precise numbers, but there were dozens of participants and a transparent procedure, all the information was available at GPE web-site.

Mr. Konoplyanik said that the first (Sept'2015) and third (Sept'2016) auctions during the market test showed that OPAL capacity is not demanded by anybody but Gazprom. In his opinion this was a real market test that proved and showed to all the parties concerned that there was no demand for this capacity. The capacity isn't demanded by anyone else except Gazprom. This is the clear message and argument for the European Commission, for other EU Authorities that the blocking of the OPAL capacity need to be canceled. The question was: whether these arguments were used and if it were used what was the reaction of European Commission?

Mr. Medvedev explained that the results were delivered to the European Commission. This question will be discussed by the Cabinet and the answer will be known afterwards.



Mr. Boltz questioned the direction of further development of the auction practices.

Mr. Medvedev supposed that the next 2-3 years the offered volume will be around 10 bcm.

Mr. Ischia was interested in the price formation: is transportation price included in the price of the auction? The answer was yes, the transportation costs are included.

Mr. Kampues commented Mr. Medvedev's speech and added that from the perspective of everybody who is not dealing with it on an everyday basis, OPAL is a strange thing, because its unique – it seems to be out of market, and the EU Commission has difficulty in understanding how this pipeline works and how the capacity is allocated, this is what makes this issue so complicated.

5. Transit risk of Russian gas supplies to the EU prior to and post 2019

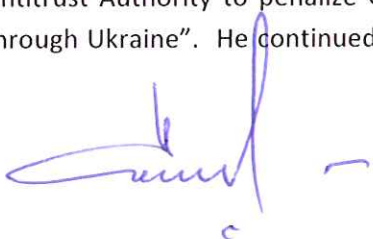
Mr. Konoplyanik (Gazprom export) gave a presentation on transit risk minimization instruments for Russian gas supplies through Ukraine to the EU, noting that this is a very sensitive issue at the present moment. This is why, he continued, the aim of this topic to be placed in the agenda is to demonstrate and explain to EU colleagues the vision and arguments of the Russian/Gazprom Group side of the risks and costs of continued transit through Ukraine and thus the economic, financial, legal motivation for the alternative routes by-passing Ukraine. By putting this discussion in the bilateral format within WS2/Consultation, Russian side expects that EU colleagues will critically assess Russian side argumentation and either agree or disagree with it (and would provide their counter-arguments in the latter case) which in both cases will enable better understanding of the motives of the Russian side and will narrow corridor of misunderstandings/disagreements on this issue within economic-financial-legal area.

He started with illustrating that contracted export volumes of Russian gas to the EU tend to decline in the future. Nevertheless, they last though much beyond 2019, i.e. post the date when the transit contract with Ukraine will come to its end for Russian gas supply contracts to the EU. He pointed out the main question: whether transit transportation risks are still there for existing and new contractual volumes and how to minimize them?

Mr. Konoplyanik argued that transit risks through the territory of Ukraine has increased at least post-2014. He distinguished technical and political risks for transit flows.

Furthermore, he explained that the physical security of the Ukrainian gas transportation system (GTS) has been worsening in the absence of necessary investments in the modernization and due to the terrorist threat from inside Ukraine. Moreover, the development of the internal Ukrainian legislation, adopted Ukrainian laws enables to stop Russian gas transit as a means of sanctions against Russia - special law on sanctions or the law forbidding Russian investments in the Ukrainian GTS (even if the latter would be aimed at modernization of it). Only European, American and Ukrainian companies can invest in the modernization of the Ukrainian GTS and can be part to this potential international consortium aimed on the modernization of the system. On top of this, the unilateral decision of the NRA of Ukraine in 2015 to increase transit tariffs since 2016, i.e. before the end of transit contract and to implement them to Russian transit with immediate effect, contradicts with international law principles. It said (by the Ukrainian authorities) to be based on results of implementation of the EU legislation in Ukraine since Ukraine is the member of the Energy Community Treaty. This is why it needs to apply the Third Energy Package rules and the EU legislation in Ukraine. In implementing exit-entry system Ukraine moves from distant tariffs to exit-entry tariffs, which resulted in transit tariff's growth.

Mr. Konoplyanik also underlined the administrative pressure on Gazprom including the decision of the Ukrainian Antitrust Authority to penalize Gazprom (by the USD 3+ bln) as if "for its monopoly at the gas transit market through Ukraine". He continued with important question: whether Gazprom is a provider of the transit services



(in which case it might have been correct to raise such question), or is just receive the transit services (in which case such questioning just do not have economic sense)?

On top of this, the level of gas injection into the underground gas storage (UGS) in Ukraine is quite low. This volume was about 14,3 bcm earlier October contrary to general expectation that need to be around 19 bcm if the EU consumers need to pass through the winter season with no concerns for the stable gas transit. Such low level of injection into the UGS creates the risk for stable transit flows and increases the risks of unauthorized takings from transit flows in case of more cold weather in Winter (as it unfortunately happened in Jan'2006 and Jan'2009). That does mean, that the transit risks are still there and they are increasing.

Mr. Konoplyanik explained the economic motivation for the alternative pipelines as a "risk-avoidance" approach of the exporter to fulfilling his supply obligations. It is Gazprom's responsibility to deliver contractual volumes of gas to delivery points within the EU. This is why it is the sovereign right of exporter to define transit risks and it is his (exporter's) evaluation of such transit risks that does matter, and not of the other parties (especially if the latter see no transit risks in the cases when the supplier does see them), he added. In the unbundled EU gas market the very legal EU system provides opportunity for the exporter to compare, after the transit contract expires within the still lasting supply contract, whether to continue gas transportation via existing transit route or to develop a by-pass route (including comparative risk-evaluation).

Mr. Konoplyanik demonstrated and explained the "transit interruption probability index" (developed by A. Konoplyanik and M. Larionova) and has shown that in 2013 it began to grow and nowadays stands at its highest levels (reflecting maximum transit risks).

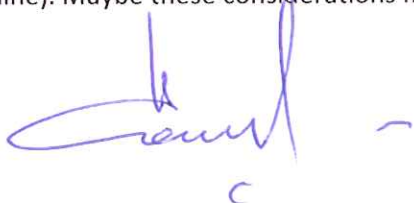
Therefore, Gazprom should be able to choose a cheaper and more reliable transit route after the current transit contract expires, taking into consideration increasing risks and costs of existing Ukrainian transit.

However, both the EU and USA, on numerous occasions have stated that they welcome continuation of Russian gas transit via the territory of Ukraine post-2019 and thus they are opposing North Stream 2 and supporting a modernization of Ukrainian GTS. From Mr. Konoplyanik's view, the real purpose of continuation of transit flows of Russian gas via Ukraine might lie in the EU and US intention to provide Ukraine with steady financial flows of transit revenues and thus either to save adequate sums from the potential spending of EU/USA public finance, or to secure pay-back of potential investment of trilateral Ukraine-EU-USA GTS consortium (acc. to UA law 4116a) in modernization of UA GTS. Both can be done only in case Russian transit through Ukraine to the EU will continue in big volumes post-2019.

In conclusion, Mr. Konoplyanik raised the question: what are the possibilities to find ways for Ukraine to earn money from gas or in gas sector without transit of Russian gas. If these will appear, maybe the EU and USA authorities at least soften their position towards Ukrainian bypasses by Russia?

Mr. Konoplyanik suggested to re-evaluate (re-think) prospective future role of UGS in Western Ukraine. These UGS have been used historically for seasonal adjustment of contractual flows of Russian gas transited through Ukraine to the EU. Maybe the new revalued role of UGS in Western Ukraine might be changed to an instrument of adjustment to fluctuations of market prices at the neighboring hubs in which case Gazprom should expand its presence at the hubs (and shall not be prevented from doing so by EU authorities, say, DG COMP).

In this case Ukraine can earn from its UGS use, the latter not being an instrument of seasonal adjustments in unidirectional East-West transit flows of Russian gas, but being an instrument of adjustments to market price fluctuations at the hubs and thus will provide bi-directional flows from/to neighboring hubs (incl. Baumgarten, in which case this will solve the issue of Slovak GTS utilization without/diminished Russian gas transit through Ukraine). Maybe these considerations might help to diminish the opposition for Ukrainian bypasses.



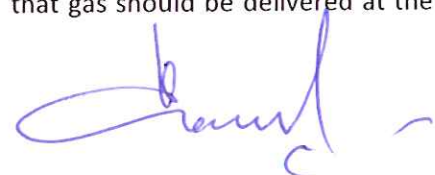
Mr. Gudkov (Gazprom) continued with legal and political aspects of Ukrainian transit risks. The objective situation is that since-2014 when the political crisis in Ukraine emerged the transit world has changed completely and new risks have appeared. Among them: physical security of the transit system may not meet a "stress-test" of increased utilization without huge investments: around \$8 b for 7-10 years (old risk); political unpredictability and "frozen" military operations in the country (new risk); accidents on pipelines and other strategic energy infrastructure objects ; enactment of Law authorizing Ukrainian Security Council to cease at its discretion transit of Russian gas through Ukraine; multibillion arbitration cases between Gazprom and Naftogaz on supply and transit issues; administrative acts of Ukraine aimed at unilateral (outside arbitration) increase of gas transit tariff 1,5 times as compared to contractually agreed tariff; imposition by Ukrainian antimonopoly committee of \$3,4 b fine on Gazprom for alleged abuse of dominance on "Ukrainian market of gas transit services" (which Gazprom has never rendered but only received); lack of trust between the parties which narrows prospects of mutually acceptable decision by the end of 2019 when the current transit contract ends. The new risks have raised from the Ukrainian legislation and some practice originated form it.

Mr. Gudkov underlined that these transit risks are new in the sense they were not foreseen at the time when the majority of gas supply contracts were concluded between the Russian gas supplier and its European counterparts. When these contracts were signed the transit matrix was different. The new transit risks represent the change of circumstances.

Mr. Gudkov raised the question how to deal with the increasing transit risks. Mr. Gudkov offered the three practical options: 1) to exclude transit risks by building the alternative infrastructure which can be a subsidy for risky and costly route; 2) for one of the parties of the commercial relations it is for the supplier / buyer to take these transit risks; 3) for the seller and buyer to share the transit risks between themselves. The Russian supplier made a choice to build new secure alternative routes which could completely prevented the transit risks via the territory of Ukraine. Nord Stream 1 was put into the operation in 2011-2012, South Stream project was completely ready for the construction by 2014, the final decision was taken and the contracts were signed on this project. Nord Stream 2 was initiated in 2015 with the signing of shareholder's agreements. Finally, Turkish Stream was initiated by signing of intergovernmental agreement. The importance is that all the projects are not absolutely Russian, but also European projects. They are supported by the market and the European major companies which participate as shareholders of project companies and share risks and benefits arising from these projects.

Mr. Gudkov presented his perception of the attitude of the European Commission's view towards new pipelines initiated by the Russian supplier by the following facts: that in 2014 the Commission called for the "suspensions" on these projects and its "re-evaluation in light of the EU's energy security priorities" (May 2014) and triggered such suspension by a "letter of formal notice" sent to Bulgaria (June 2014). "Suspensions" were nor defined and there were no clear understanding how the re-evaluation should be made. Settlement agreement on OPAL of 2013 provided the possibility to fully use this pipe. Already three years passed after the signing of the agreement and it's not improved nowadays. Mr. Gudkov hoped that the decision will be reached soon. Finally, there are well-known statements of the DG ENERGY and of the European Commission officials which are not supportive for Nord-Stream-2 project. The basic approach of the European Commission, as Mr. Konoplyanik also mentioned, seems to be that Ukraine should remain the transit state post-2019. Mr. Gudkov raised the question: why Ukraine should remain the transit state nevertheless it's costlier and a more risky route? Is this approach based on the international politics or it's based on the energy politics. Security of supply is the part if these policies, so how it correlates with them?

Mr. Gudkov continued with the legal approach of the sharing the transit risks between supplier and customers. On the one hand, gas supply contracts signed between the Russian supplier and its European customers provide that gas should be delivered at the certain points at the EU territory. The conclusion is that all transit risks in all



circumstances are on the supplier. But, by the International Trade Law, especially Vienna Convention on Contracts for the International Sale of Goods 1980, the basic message is that if the performance of the supplier contract is hindered by unexpected event (an impediment beyond his control), this event could serve as the justification for the supplier not to be liable for a failure to perform any of his obligations, and, secondly, this event can be a trigger for the revision of gas supply contracts in order to restore the balance of interests of the parties. To summarize, the Russian gas supplier should not be considered as the only taker of the Ukrainian transit risks. The risks are to be shared with the EU customers.

Mr. Gudkov made two basic conclusions to his presentation: new pipeline projects, if they are supported by the market and if they are compliant with law, should not be hampered by political considerations. And if the alternative capacity isn't created in some time, then there is a need to discuss the means how to fairly allocate the new transit risks. This discussion should be held without delay between all the interested parties.

Mr. Solheim (Yara International ASA) asked two questions: 1) Will Gazprom supply gas to Ukraine? 2) When will Gazprom make final investment in North Stream 2?

Mr. Gudkov: With regard to the first question, commented that there is contractual framework and all legal grounds for supply, nothing has changed.

Mr. Mazilov (Gazprom Export): With respect to the second question - the work on investment is ongoing and Gazprom is doing its best to resolve all the related issues so that to finalize the project in time.

Mr. Konoplyanik: In any way the major aim and intention of Gazprom is to do its best to keep with the schedule and to guarantee supplies to the European customers.

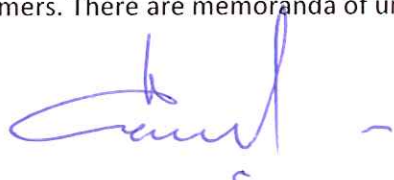
Mr. Ingwersen (ENTSO) underlined that political issues were not addressed here, but to contribute to transparency of the market. There are a lot of political questions, but there are also some objective issues. If the gas flow pattern is changing and transit is being switched from one side of Europe to another, the European Commission has a legitimate interest in getting knowledge about it. Anyway, a very important point that was raised is a question of mutual political trust, and it would be interesting to learn more on the view of the Russian side.

Both, Mr. Gudkov and Mr. Mazilov, explained that the buyers have different instruments for securing their interests under the contracts. There are some periods of low demand (e.g. in summer) when there is decrease ("gaps") in transportation, but the process is transparent.

Mr. Dickel (Energy Consulting) commented that it would be naive to say that the issue is not politically influenced, and of course Russia has a right to choose its supply route. Russia has to take into account its administrative procedures, which can take a lot of time. Additionally, there is a construction of the off-shore part in a naturally protected area, which is difficult as well. In this respect 2019 as the year of finalization of North Stream 2 seems extremely optimistic at least. In the end, a political compromise is needed, and Ukrainian transit has to be preserved in some way, for the reasons of diversification of the routes, since North Stream 2 with exclusion of Ukrainian transit does not provide an alternative in reality, but rather just adds capacity to North Stream 1.

Mr. Ischia (E-Control) raised a question about the Turkish Stream: can you reveal a little bit of strategy with regard to Turkish stream and where will the on-shore part go?

Mr. Mazilov answered back that at the current moment European colleagues are requesting more gas and are eager to be involved in the Turkish stream project, so the strategy will in the end be determined by the customers. There are memoranda of understanding with the Greek side already, and there is a lot of interest from



our EU partners in South-Eastern Europe. And with regard to Mr. Dickel's comment on schedule – if everybody adheres to regulatory framework, we will be able to finish in time.

The participants discussed and exchanged general ideas on correlation between Turkish Stream and North Stream 2 and perspectives of Russian gas in Europe.

6. REMIT: issue of adequacy of information exchange: EU view.

Mr. Boltz outlined that REMIT was created to increase integrity and transparency of the EU energy market. REMIT is slightly "smarter" than financial market rules, which are decentralized. Mr. Boltz presented REMIT main provisions and pointed out that it is part of the EU regulatory framework. There is an issue of overlapp with financial market legislation. The main REMIT provisions are: 1) market monitoring and 2) data collection, 3) the sharing of information and 4) the cooperation between NRA's, 5) data protection, 6) operational reliability, 7) enforcement powers. These are the parts as to the REMIT surveillance. The REMIT market part consists of: 8) prohibition of insider trading, 9) prohibition of market manipulation, 10) publication of insider information, 11) report data, 12) registration as market participants, 13) notification of suspects by PPAT. In that case ACER can only collect data and don't analyse it. Financial Market can only collect data, ACER can only analyze it. The market collects the data and send it to National financial sectors and not allows to look at the data. ACER can look at the data and analyze it by itself.

The question of the Financial Market Legislation, because the commodity trading roles on the international levels have been modified and now are under development. The electricity and gas are the concerned commodities. Mr. Boltz explained that the Financial Market Legislation has a very different objective, than the REMIT legislation. The Financial Market Legislation has the objective to be sure that market participants don't be bankrupted or the single participant doesn't create structural problems in the market. On top of the REMIT regulations are numerous legislation cases, decisions by the European Commission, technical specification by ACER. Within REMIT regulatory framework national laws deal with enforceability issues, such as investigations and sanctions. The interesting part of REMIT is NRA's cooperation and data sharing. One problem that came up is, that a large number of brokers are located in London, but they trade the electricity in Poland. If there are suspicions coming up in Poland, the action and investigation cannot be done by British Authorities. So, this cooperation causes difficulties, because it's unusual. It will be developed further.

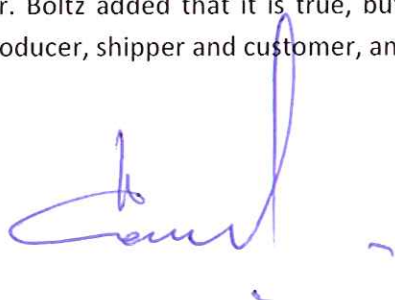
Mr. Boltz continued with the timeline of the REMIT regulation. The REMIT regulation development was started in 2011. The final fully applicability of REMIT started 2016, however, there are a lot of technical issues left.

Mr. Timofeev (Gazprom export) asked Mr. Boltz to explain why gas market is so special that it requires special Regulation with respect to insider trading and market manipulation?

Mr. Boltz's answered that gas and electricity require special set of rules, because energy is provided in large numbers to a lot of customers, and interruption in gas/electricity supply even for a week will interfere with safety and even health and life in some cases.

Mr. Timofeev commented that the coal market is still absolutely free from any such requirements, and coal is a major energy resource in many EU countries.

Mr. Boltz added that it is true, but the reason could be that there is a much weaker connection between the producer, shipper and customer, and nobody felt the need for regulation.



Mr. Mazilov (Gazprom export) said there might be a situation with only one shipper at the interconnection point, and even though GPE's information cannot be published under the Regulation, but is published anonymously for the market, but everybody knows who is the shipper in question.

Mr. Boltz commented the publication of information will be delayed significantly.

Mr. Cherniy (SPIMEX) questioned whether ACER did create a special subdivision and how many people are dealing with REMIT issues?

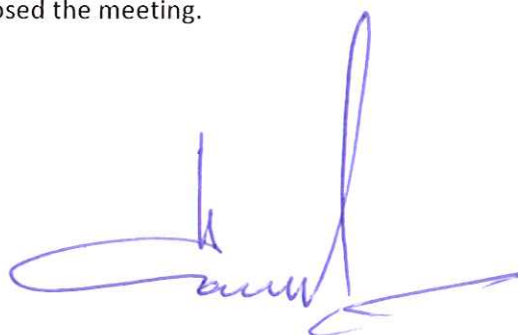
Mr. Boltz answered that there are two REMIT departments, one is collecting the data, and another is dealing with analysis, and overall there are about 35 people, but due to complexity of the issue there probably will be more in the future.

7. The co-chairmen signed the minutes of the previous GAC meeting

The WS2 Co-chairmen announced that the next meeting will be held on 2nd of December, 2016, in Vienna, thanked the participants for the intensive discussion and closed the meeting.



Co-Chair Mr Boltz



Co-Chair Mr Konoplyanik

AGENDA

Time	Items	Presenters
Morning Session 10:00-13:00	1. Greetings / Opening remarks by Co-Chairmen	W.Boltz (EU), A.Medvedev (GP), A.Konoplyanik (GPE)
	2. Results of Madrid Forum	J.Ingwensen (ENTSOG)
	3. EU draft legislation on Incremental capacity (TAR and CAM NC): - Final results of the ENTSOG-managed "Reality check" of Incremental process	J.Vitovsky (ENTSOG), T.L'Eglise (Fluxys)
	- Final CAM NC INC as approved by the Gas Committee on 13.10.2016	T.Maes (CREG)
Buffet Lunch 13:00-14:00 (at the premises of GPE)		
Afternoon Session 14:00-17:00	4. Comparative results of three GPE gas auctions 2015-2016	A.Medvedev (GP)
	5. Transit risk issue of Russian gas supplies to the EU prior to and post 2019. Two different visions - from the Russian (supplier) and EU (consumer) side and their arguments for providing mutually acceptable energy security. Whether it is possible to narrow the gap of misunderstanding between the parties on the proper "risk matrix" issue. Economic & legal aspects: - Russian view	A.Konoplyanik (GPE), I.Gudkov (GP)
	- EU view (to be presented at the next WS2 meeting in end'November/early'December)	
	6. REMIT: issue of adequacy of information exchange: - Russian view,	W.Boltz (EU)
	- EU view	
	7. Signing of the Minutes of the 27 th WS2 meeting as of 01/07/2016	W.Boltz (EU), A.Konoplyanik (GPE)
	8. Any Other Business / Concluding remarks / Next meetings	W.Boltz (EU), A.Medvedev (GP), A.Konoplyanik (GPE)




List of participants

Russian/Gazprom Group side

Medvedev	Alexander	Gazprom	Co-chair of Consultations
		Gazprom export / Russian	
		State Gubkin Oil & Gas	Co-chair of WS 2 GAC /
Konoplyanik	Andrey	University	Coordinator of Consultations
		Ministry of Energy/Russian	
Shtilkind	Theodore	Energy Agency	Co-chair of WS 3 GAC
Gudkov	Ivan	Gazprom	
Leonov	Denis	Gazprom	
Kusov	Vyacheslav	Gazprom	
Ettler	Natalia	Gazprom	
Teterin	Mikhail	Gazprom	
Krutko	Andrey	Gazprom export	
Mazilov	Vladimir	Gazprom export	
Rogozenkova	Olga	Gazprom export	
Zhur	Anna	Gazprom export	
Komlev	Sergey	Gazprom export	
Aksenov	Artem	Gazprom export	
Nemtsova	Anna	Gazprom export	
Timofeev	Ivan	Gazprom export	
Sukhotskaia	Anastasiya	Gazprom export	
Vasenkov	Andrey	Gazprom export	
Sudarev	Nikolai	Gazprom Germania	
		Foundation "Institute for	
Orlova	Ekaterina	Energy & Finance"	
		Saint-Petersburg International	
Petrov	Alexander	Merchandise Exchange (SPIMEX)	
		Saint-Petersburg International	
Cherniy	Boris	Merchandise Exchange (SPIMEX)	

EU side

Berezina	Ksenia	Gasunie Germany	
			Co-chair of WS2 GAC /
Boltz	Walter	Co-Chair	Consultations
Czetó	Daniel	eustream	
Dickel	Ralf	Energy Consulting	
		E.ON Global Commodities	
Hartmann	Reiner	SE	
Ingwersen	Jan	ENTSOG	
Ischia	Alessandro	E-Control	
Kamphues	Stephan	ENTSOG	Co-chair of WS3 GAC
L'Eglise	Thomas	Fluxys	
Maes	Tom	CREG	
Poillion	Christophe	GRTgaz	
Van Dijk	Jan Willem	Gasunie	
Vitovsky	Jan	ENTSOG	