

Russia and the Third EU Energy Package: Regulatory Changes for Internal EU Energy Markets in Gas and Possible Consequences for Suppliers (Including Non-EU Suppliers) and Consumers

Dr Andrey A. Konoplyanik*

Developments in EU energy law and external producers

The first question which naturally arises is “why this title”? Why is and why should the Third EU Energy package be discussed by those who are not the citizens of the European Union, who are not representing any Member State, an agency or a company of the European Union which has been quite regularly described as “Europe”?

While it is understandable that ordinary people, even non-energy experts, usually use the term “Europe” when they are in fact referring to “the European Union”, it is however necessary to provide the mutual understanding that “energy Europe” (“Europe” in terms of energy flows) has a much broader scope than “the European Union” (within its current political boundaries) or even the “geographical Europe” (from the Atlantic to the Urals). This is because today the European Union (as a community of end-user markets and of mostly energy-importing states) is interconnected by the immobile, fixed infrastructure with the non-EU energy producers and transit states and investment decisions of the latter regarding the energy projects destined for the EU markets are based on the sovereign decisions of these non-EU states.

First of all, “energy Europe” includes not only the EU Member States per se, but also those European countries where EU energy legislation (the EU Energy Directives) is in force. These are the countries of the Energy Community Treaty, concluded between the EU and the countries of the South-East Europe. Most recently two

former Soviet Union states have acceded to the Energy Community Treaty: Moldova (on May 10, 2010) and Ukraine (on September 23, 2010). In addition to this, the integral part of “energy Europe” is the rest of “geographical Europe”, part of North Africa and even part of Asia (Russian Western Siberia, where all major oil and gas pipelines destined for Europe begin, and Central Asia, whose gas deposits are connected with common European gas infrastructure through the Russian gas transportation system, formerly the single United Gas Transportation System of the USSR). “Energy Europe” tends to enlarge since new pipelines have been and are to be built which will expand “energy Europe” further South-East to include North-East Africa, Eastern Mediterranean and part of the Middle East.

This means that for all these countries, which are either connected today or will soon be connected with the European Union through the immobile fixed infrastructure, through cross-border pipelines, EU legislation—and in particular EU energy legislation—does matter when they are taking their sovereign investment decisions regarding their export-oriented energy projects destined for EU energy markets. This applies regardless of the particular segment of the cross-border gas value chain a country is located in (whether it is placed at the non-EU producer end or non-EU transit segment or in-EU transit and/or end-user segment of the cross-border gas value chain). For non-EU Member States and for non-members of the Energy Community Treaty, internal EU energy legislation is not binding, but the current state of development of this legislation and its further development trends can stimulate or de-stimulate the sovereign energy investment decisions of non-EU producers and transit states. This is what at least one facet of the “security of demand” concept is about.

The relationship between the European Union and its external trading/energy supply partners justifies the intensive examination that has been taking place in non-EU states regarding development of internal energy legislation in the European Union. These developments have clear external long-term investment and trade consequences. This explains, for instance, the objective reasons for regular informal bilateral technical consultations which started in January 2010 between energy specialists of the European Union (representatives of the energy regulators of the EU Member States and the Commission), and energy specialists from Russia (as a key non-EU gas exporter). These consultations are aimed to discuss the potential challenges and risks that development of internal EU energy legislation and in particular of its Third Energy Package creates for all participants in these cross-border energy value chains.¹

* Director for energy markets regulation, Project Leader, Foundation Institute for Energy and Finance and Professor, Russian State Oil & Gas University n.a. acad. I.M. Gubkin, Chair “International Oil & Gas Business” (Moscow, Russia), <http://www.konoplyanik.ru> [Accessed November 10, 2011].

¹ See “The 3rd Energy Package and the concerns of non-EU gas producers: An interview with Dr. Andrey Konoplyanik”, *Eurasia Energy Observer*, February 12, 2011 <http://www.eurasia-energy-observer.com/news/new/interview-with-andrey-konoplyanik> [Accessed November 10, 2011].

Towards growing interdependency within broader “energy Europe”

Within our current global energy world, energy actors are interconnected and thus interdependent. It is quite clear that within this global energy world it is no longer possible to talk about the “energy independency” of any single energy actor as the modern energy markets and their actors are both interconnected and interdependent. We are interdependent, at least within “energy Europe”, because we are interconnected with immobile fixed capital-intensive energy infrastructure with a long-term life-cycle. So the European Union is interdependent in the long-term with Russia since Russia has been and, most probably, will stay as the largest energy (gas) exporter to the European Union. Russia, in turn, is interdependent in the long-term with the European Union since the European Union has been and will continue to be its major export energy market, which provides for Russia a bulk of its export earnings.

Within these cross-border European or Eurasian energy value chains, the idea of “national energy security” today means simultaneously both “international” and “national” energy security. And these two definitions are very close to each other. “International energy security” does not only include the “security of energy supplies”, as it has been traditionally considered in the Western part of the de facto common energy space of the European Union and Russia. Instead, it includes the triangle consisting of “security of energy supplies”, “security of energy infrastructure” and “security of energy demand”.² Within this interconnected and interdependent energy space, the biggest threat to international energy security from the economic standpoint is the threat of incorrect investment decisions (if we put aside different political and military aspects of energy security and deal within the triangle of energy economics, energy financing and energy legislation).

Since energy projects (especially grid-bound, such as gas or electricity) are the most capital-intensive and have the longest life-cycle compared to other industries, this does create objective demand for an in-depth examination of potential risks for such projects. Very close attention must be paid to the evaluation of their prospective risks and to the risk-management of prospective investment decisions, including, first and foremost, the non-commercial risks.

The European Union has been and definitely will be the major energy export market for Russia, regardless of what the situation of Russia’s exports to China will be. The Asian dimension and the Asian export vector of

Russian energy policy, in the author’s view, will always be additional to the European one. This does mean that challenges and risks that appear in the European market can stimulate or de-stimulate EU-oriented energy trade and investment from all the non-EU energy suppliers. This may be a generalised concern of all non-EU energy suppliers and, to some extent, of transit countries as well, not only of Russia. So it is better to know in advance—preferably well in advance—all current and future developments of internal EU energy policies and legislation, all its related risks and challenges and to find out in advance how to best face them and not to make a “wrong” investment decision.

This is not only in the interests of producers and exporters. It also matters for the European Union and its companies since they are participants in global competition in non-energy spheres: the higher the risks of energy supplies to the European Union by non-EU producers, the higher the cost (end-use price) of energy for EU end-users, and the lower the competitiveness of EU non-energy goods within global competition, due to the higher energy-cost component in the price of its goods and services.

“Designed markets”: risks & challenges of desired outcome

The author concurs with the opinion presented by Jiri Novotny from LDH Energy at the October 2010 Argus Gas Conference in London:

“Energy markets evolved in two different ways: (a) bottom-up — the market evolved to serve the natural need of the market participants (oil, oil products, coal), and (b) designed markets (gas, power, emissions) ... Design not always leads to the desired outcome.”³

The development of the EU legislation reflects the creation of such “designed markets”; it has been not so much driven by business (“bottom-up”), but mostly by administrative/political forces/efforts/modeling based on not concepts and perceptions which have not always been well justified and fully proved in practice. One example is overestimation of the role of competition which has been usually interpreted by the Commission’s DG COMP as “the more competition (number of players), the better (end-user price will hopefully go down)”. This is a short-term view and does not consider whether the regulatory framework is able to provide for investment incentives for creating additional energy supplies for the European Union in the long-term. The best example of

² This author has been publishing rather intensively on the issue of tri-lateral dimension of the “international energy security” concept during his tenure as the Deputy Secretary General in the Energy Charter Secretariat, see, for instance: A. Konoplyanik, “Energy Security: The Role of Business, Government, International Organisations and the International Legal framework”, (2007) 6 IELR 85; A. Konoplyanik and T. Walde, “Energy Charter Treaty and its Role in International Energy”, (2006) 24(4) *Journal of Energy and Natural Resources Law* 523; A. Konoplyanik, “Energy Charter: the key to international energy security” (2006) 2 *Petroleum Economist* 19; A. Konoplyanik, “The view from Brussels” in H. McPherson, W. Duncan Wood and D.M. Robinson (eds) *Emerging Threats to Energy Security & Stability* (Springer, 2005), pp.79–86; A. Konoplyanik, “Energy Security and the Development of International Energy Markets” in B. Barton, C. Redgwell, A. Ronne and D. Zillman (eds), *Energy Security: Managing Risk in a Dynamic Legal and Regulatory Environment* (Oxford: Oxford University Press, 2004), pp.47–84, and A. Konoplyanik, “Responding to Emerging Threats to Energy Security and Stability”, (2004) 2 OGEL 2. (These and other author’s publications and presentations are available at <http://www.konoplyanik.ru> [Accessed November 10, 2011]).

³ Jiri Novotny (Vice-President Gas and Power Trading, Louis Dreyfus Highbridge Energy/LDH Energy), “Market Power and the Power of the Market”, Presentation at the Argus European Natural Gas and LNG Trading Conference, October 6–7, 2010, London, UK.

such overestimation and its different (rather than expected) consequences recently presented the global oil market with the Anglo-Saxon concept of open, competitive, liquid markets, which the Commission has attempted to implement within Continental Europe (as the “designed market”) after it has been implemented in the United States and the United Kingdom. Two comments need to be made in this regard.

First, during the author’s time in the Energy Charter Secretariat, the Secretariat published a detailed study on why the United States and the UK model for gas markets might not be workable for Continental Europe and the whole of Eurasia⁴. This was discussed within the community of the 51 Energy Charter Treaty Member States and was not objected to by any of the stakeholders. It has been argued that the economic fundamentals underlying the design of gas markets in the United States and the United Kingdom are totally different from the economic fundamentals underlying market design in continental Europe. The most important among these differences are the following:

- In the United States and the United Kingdom the development of the gas industry was based on their own resources with no initial dependence on imports, while in Continental Europe high import dependence took place from the very start of large-scale gas developments;
- In the United States and the United Kingdom supply is based on small to medium size gas fields, while in the Continental Europe supply is based on imports from giant/supergiant fields; and
- In the United States and the United Kingdom development decisions are taken by a multiplicity of private players within standardised rent-taking, while in Continental Europe development decisions are taken by a few sovereign non-EU exporting countries (located outside of legislative reach of the consumers/importers) aimed to maximise

the resource rent (both Ricardian and Hotelling rents⁵) of the producers/exporters.⁶

Secondly, the current well-developed Anglo-Saxon model of market design in oil has demonstrated in this decade turbulent price fluctuations which cannot be explained by the development of oil fundamentals.

Some people suggest that the upward trend in global oil prices up to 2007 was due to the limits of Saudi oil production. So, while some of the historical price spikes were created by political events, the slow and steady upward trend since 2000 has been due to inability of the oil producers, Saudi as the swing producer in particular, to respond to the fast growing demand of world markets. In the author’s view, lack of spare oil-producing capacity at the beginning of the century, as a result of the underinvestment of the 1990s, has led to a cost increase which is only a partial explanation of the oil price growth in the first half of the decade.⁷ But then new—financial—forces entered the game and took the leading role in price movement. The global oil market has historically developed step-by-step from the market of physical oil into the commodities market (market of “paper” oil) which lately has lost its dependence on oil fundamentals and has become just a small segment of a global financial market where the dominant players are non-oil speculators who nowadays influence oil price developments strongly. It is fair to say that today the oil price does not reflect the balance (equilibrium) in physical oil supply and demand any more, but rather reflects the balance in supply and demand in paper oil (oil-related financial derivatives).⁸ Would end-users in Continental Europe prefer to have a “designed market” which faces the price fluctuations that have been experienced recently in the oil market with its highest available liquidity (see below) or the price fluctuations experienced in the US and the UK gas markets? Is such a “designed market” really what Continental Europe would like to achieve in gas?

So within such a “designed market” a continuous dialogue between all the parties within the cross-border energy value chains is needed, maybe even much more than within the “bottom-up” markets to diminish

⁴ See *Putting a Price on ENERGY: International Pricing Mechanisms for Oil and Gas* (Brussels: Energy Charter Secretariat, 2007), especially para.4.1: “Will Gas Follow Oil to Become a Global Commodity” (pp.99–102) and corresponding Table 4 of the same title at p.102 (available at <http://www.encharter.org/publications> [Accessed November 10, 2011]).

⁵ See *Putting a Price on ENERGY: International Pricing Mechanisms for Oil and Gas* (Brussels: Energy Charter Secretariat, 2007), Chapter 2 “Explaining Oil and Gas Pricing Mechanisms: Theoretical and Historical Aspects” and in particular Figure 2 “Rents of Oil Production” at p.46 (available at <http://www.encharter.org/publications> [Accessed November 10, 2011]), and in more detail see A. Konoplyanik, *Evolution of Gas Pricing in Continental Europe: Modernization of Indexation Formulas Versus Gas To Gas Competition* (Centre for Energy, Petroleum & Mineral Law & Policy, University of Dundee. International Energy Law and Policy Research Paper Series, Working Research Paper Series No: 2010/01, February 18, 2010) (<http://www.dundee.ac.uk/cepmlp/gateway/index.php?news=30775> [Accessed November 10, 2011]); A. Konoplyanik, “Evolution of gas pricing in continental Europe: a view from Russia (Modernization of indexation formulas versus gas-to-gas competition)” *Oil, Gas and Energy Law Intelligence* (OGEL), June 2010, #021 (<http://www.ogel.org> [Accessed November 10, 2011]).

⁶ *Putting a Price on ENERGY: International Pricing Mechanisms for Oil and Gas* (Brussels: Energy Charter Secretariat, 2007), p.102 (<http://www.encharter.org/publications> [Accessed November 10, 2011]).

⁷ See М.Белова, А.Конопляник (M. Belova, A. Konoplyanik) Почему и почему? Некоторые причины роста цен на нефть и прогнозы дальнейшего развития событий (“At what cost and why? Some reasons for the oil price increase and the forecasts of the future developments”) «Нефть России» (“Oil of Russia”), август (August) 2004, № 8, с.(p.)106, М.Белова, А.Конопляник (M. Belova, A. Konoplyanik) Неудержимые издержки. Мировые цены на нефть идут на поводу у научно-технического прогресса (“Uncontrollable costs. World oil prices are following the scientific & technical progress”) «Нефть России» (“Oil of Russia”), сентябрь (September) 2004, № 9, с.(p.)80.

⁸ For more details, see A. Konoplyanik, “Who Set International Oil Price? A View From Russia”, (Centre for Energy, Petroleum & Mineral Law & Policy, University of Dundee. International Energy Law and Policy Research Paper Series, Working Research Paper Series No: 2010/02, February 18, 2010) (<http://www.dundee.ac.uk/cepmlp/gateway/index.php?news=30776> [Accessed November 10, 2011]); A. Konoplyanik, “Who sets international oil price? A view from Russia (Analysis of 2003–2008 oil price increase and its collapse examined within historical evolution of international oil market contractual structures and oil pricing mechanisms)” *OGEL*, June 2010, #022 (<http://www.ogel.org> [Accessed November 10, 2011]).

cross-border risks and costs, to balance trade and investment stimuli, physical and paper energy markets. And such dialogue needs to be undertaken from the early stages of intended transformations of the “designed markets” and well in advance of them, well before the corresponding legal documents have been drafted and/or agreed by the legislators and have been implemented.⁹

Structure of the Third EU Energy package (2009) opens a window of opportunities

The author believes that today we still do possess a window of opportunity (time-frame) to discuss and to improve the Third EU Energy package, if EU legislators will take into consideration the fair and justified concerns of non-EU energy producers and transit states. Moreover, this window of opportunity seems today to be broader than it appeared in September 2009 when the Third Energy Package entered into force and when we had agreed with our EU colleagues on the need for informal bilateral consultations to clarify the unclear provisions of the Package. Directive 73/EC/09,¹⁰ Regulations 713/2009¹¹ and 715/2009¹² entered into force on September 3, 2009. In accordance with art.54 of the Directive:

“Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by 3 March 2011. ... They shall apply those measures from 3 March 2011 with the exception of Article 11 [Certification in relation to third countries] which they shall apply from 3 March 2013.”

“The Regulations shall be binding in their entirety and directly applicable in all Member States, they shall apply from 3 September 2009 except Articles 5 to 11 [Chapter II ‘Tasks’] of the Regulation 713/2009 that shall apply from 3 March 2011.”

At the Energy Council meeting of February 28, 2011, the European Commission said that seven countries—Austria, the Czech Republic, Denmark, France, Greece, Italy and Portugal—are expected to notify the Commission of the arrangements required “in the coming weeks”. Nine others—Estonia, Germany, Latvia, Luxembourg, the Netherlands, Slovakia, Slovenia, Sweden and the United Kingdom—are expected to follow suit in the summer. The others, including Belgium, Spain and Hungary, currently chairing the Council, are well

behind. Energy Commissioner Günther Oettinger showed great flexibility, giving Member States until the autumn to transpose Community law into national law.¹³

In addition to these three documents of the Third Energy package related to gas, one non-legally binding Gas Target Model, 12 non-legally-binding Framework Guidelines and 12 legally-binding Network Codes should be developed to clarify provisions of the three gas-related documents of the Third Package that have already entered into force.

When the group of Russian experts started to discuss the possible time-frame of preparation of Framework Guidelines and Network Codes with the EU energy regulators, it became clear at the very first meeting in January 2010 that it would take some further time to draft, discuss and approve these documents after at least March 2011—the first deadline indicated in the Directives. The whole process could take two to four years, especially if the drafters wish to take due consideration of the justified concerns of all the parties involved in the cross-border energy value chains destined for the EU market. This was recently confirmed by the EU Energy Commissioner, who stated that the documents for the EU internal gas market need to be ready by 2015. This means that it might be possible, on the one hand, to clarify within these two dozen new subordinate documents those provisions of the Directive 2009/73/EC and the Regulations 713/2009 and 715/2009 that provide multiple interpretations, including those that create incremental risks for non-EU energy suppliers to the European Union. On the other hand, it might be possible to argue with and to (try to) prove to the EU regulators, the drafters of the corresponding Framework Guidelines and Network Codes, mutually beneficial solutions for the provisions of these documents. It is quite clear that it can be done with the “force of argument” only. And it is also clear that it would be a sovereign right of the EU legislators whether to take the proposals of the non-EU players into consideration or not, non-dependent on whether these proposals seems to be mutually-beneficial for the non-EU party.

This practical consideration on the timing necessary for drafting 12 Framework Guidelines and 12 Technical Codes opens possibilities and creates opportunities for regular, continuous discussions (preferably in the form of informal expert consultations—not formal political negotiations) between the corresponding EU and non-EU actors, especially involving those experts from both sides who understand how the gas business has been working, how it is organised and being managed, how the energy markets have been evolving, etc. Russian energy/gas

⁹ At the early stages of the bilateral informal consultations we (Russian experts) have heard from our European colleagues “where have we (Russians) been before the Third Directives and related documents were approved by the European Parliament” to indicate our justified concerns regarding unfavourable consequences of this or that provision of the Third Energy package. This proves that non-EU energy players, that have their pragmatic—not political—interest in the EU energy market, can present such facets that might be invisible/non-understandable for in-EU legislators.

¹⁰ Directive 2009/73 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 [2009] OJ L211/94.

¹¹ Regulation 713/2009 of the European Parliament and of the Council of 13 July 2009 establishing an Agency for the Cooperation of Energy Regulators [2009] OJ L211/1.

¹² Regulation 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005 [2009] OJ L211/36.

¹³ <http://www.agenceurope.com/EN/index.html> [Accessed November 10, 2011].

experts have been attentively following development of the EU energy legislation.¹⁴ Such consultations will most probably be addressing rather sensitive issues, sometimes the issues on which both parties do not know yet the best available and mutually acceptable answer, which needs to be developed in the course of such consultations.

Informal consultations between Russian gas experts and representatives of Energy Regulators of EU Member States on the problematic issues of the Third EU Energy Package

On September 2, 2009, just on the eve of the Third EU Energy Package entering into force, Walter Boltz, General Director of the Austrian Energy Regulator “E-Control” and the Head of the Gas Working Group of the CEER/ERGEG and the author met at the energy panel of the Alpbach Economic Symposium in the Tyrol, Austria. In conversation after the session we came to the conclusion of the necessity to organise bilateral informal consultations between Russian gas experts (including representatives of Gazprom Group) and European energy regulators (including representatives of the Commission) on the problematic issues of the Third EU Energy package and related documents that are to be developed (Framework Guidelines and Network Codes) regarding the gas industry.

Our European colleagues initially considered consultations with the aim of explaining to Russian colleagues provisions of the Third Gas Directive and Regulations 713/2009 and 715/2009 which were either not clearly drafted and/or could be interpreted in a multiple (including an incorrect) way. They would also like to explain to us future directions of preparation of the other documents of the Third Package in order to provide additional transparency and to diminish concerns expressed by the Russian party on the Package since it was first announced in 2007.

On the Russian side, we saw the aim of such consultations as both to clarify the unclear provisions of the Third Package documents that have entered into force, and to provide to our European colleagues our justified and argued concerns as a major non-EU supplier to the European Union to be, hopefully, taken into consideration by our European colleagues in the drafting process with the aim of minimising costs and risks for the EU-oriented Russian (and other non-EU) gas supplies.

Informal bilateral consultations began in January 2010. First meetings were devoted to discussions on the detailed lists of questions provided by the Russian side on the

provisions of the documents that have entered into force on September 3, 2009. During these discussions European energy regulators agreed that the documents of the Third Package are not clear and are even contradictory in some of their provisions. We have clarified some joint understandings and received clarification on many questions. Moreover, during the very first round of consultations we raised the issue of the necessity for the EU side to provide an overall vision of the future architecture of the internal EU gas market which needs to be developed, in our view, prior to the development of Framework Guidelines and Network Codes. It seems that only after that the corresponding EU authorities have started (in the second half of the year) to develop a gas target model of the internal EU market.

Further discussions were based on and correlated with the drafts of the documents of the Third Package available at the moment of corresponding rounds of consultations: on capacity allocation mechanisms, on congestion management, on a gas target model, on a 10-year network development plan. In parallel with this, Russian experts, at the invitation of the EU side, began to participate in the internal EU process of multilateral public consultations (for EU stakeholders) on the documents to the Third Package that are being prepared.

From January 2010 to April 2011 six rounds of bilateral consultations¹⁵ were organised, not taking into consideration our participation in different internal EU events within the processes of public EU consultations on individual normative documents to the Third Package. Political leadership of both Russia and the European Union has acknowledged mutual benefits of our Russia-EU informal consultation process and has supported at the level of Russia-EU Energy Dialogue the necessity of its continuation. Moreover, in January 2011, Deputy Coordinators of the Russia-EU Energy Dialogue, Russian Deputy Minister of Energy A. Yanovsky and Director General of DG ENERGY of the Commission P. Lowe, have established an additional (fourth) Working Group within the framework of the Russia-EU Energy Dialogue—an Ad Hoc Working Group on the problematic issues of the Third EU Energy Package. Our consultations process is aimed at providing expert support to this ad hoc Group.

It is understood that 2011 is a key year for preparation of the main normative documents to the Third Energy Package. This year we endeavour to move to a higher level of co-operation between the parties within the consultation process. We hope that both Russian and the EU experts will jointly work now on developing mutually acceptable draft solutions on the problematic issues of

¹⁴ Alexander Medvedev, Deputy Chairman of the Gazprom Management Committee and Director General of GazpromExport, in an interview of October 14, 2010, “There is no need to build the Great Wall of China on the gas market”, has expressed a vision of how the Third Energy Package may impact on the relationship currently existing among market participants and how these innovations will affect Gazprom’s business in Europe. Among other things he mentioned that “the ongoing reform brings a real risk of the investment shortfall in the European gas industry — with all the consequences that come with it”. Answering the question “How is the dialogue between Gazprom and Brussels evolving relevant to the energy market reforms and protection of Gazprom’s interests? What is the progress on it?” he said that “We maintain a constant contact with various European institutions, both political and expert ones. Gazprom Group and the Russian Government, on its part, are closely examining the implementation of the Third Energy Package. This is a necessary measure to make sure that the damage caused by this process to our Company’s interests and the interests of our partners and consumers will not go beyond the bare minimum. I also hope that we will be granted the opportunity to make a significant contribution to updating the document.” (<http://www.gazprom.com/press/reportages/interview-medvedev/>).

¹⁵ Seventh round of consultations took place in June and the eighth one will take place in December this year.

the Third Package based on clarifications and explanations received from the EU party. These draft solutions will then be considered by the EU legislators for implementation into the EU normative acts to the Third Package. Official representatives of the Commission (e.g. P. Lowe) have expressed their ongoing interest in receiving from participants of consultations their joint draft proposals on the problematic issues that have raised the justified concerns of the Russian party. The author would like to underline again that it is the European Union who has the sovereign right to decide whether to implement or to ignore joint proposals developed on the basis of justified Russian concerns. But it seems (and we do hope) that the European Union is ready to treat with all seriousness Russian concerns and underlining arguments (factor of “force of arguments”) regarding the Third Package.

This is why both parties understand the importance of continuation of this informal dialogue of professional gas experts, especially on the issues of the future architecture of the internal EU gas market (EU gas target model). This model needs to consider justified economic interests and concerns of gas suppliers to the European Union from the outside of the European Union within the framework of inescapable interdependence of both Russia and the European Union and their interlinking by the fixed immobile capital-intensive gas infrastructure.

The following three major lines of actions can be mentioned in regard to the Russia-EU dialogue on the problematic issues of the Third EU Energy Package:

- Regarding continuation by the Russian side its business activities within the European Union on the basis of its current business model, when the Russian sole exporter Gazprom (and/or its affiliated companies) has both the right of ownership on exported gas (through the gas value chain up to the delivery points, which has been located since 2004 deep inside the European Union) and controls the pipelines through which this gas is delivered to/through the European Union. But the European Union has clearly stated (and this is its sovereign right) that it will not give in to the requests from Russia for exemption to new Community rules on the internal market in (electricity and) gas which aim to separate the production/supply activities and the transport activities of vertically integrated groups. “The Russian partners have to accept our rules”, Energy Commissioner Günther Oettinger told the press as he inaugurated the Agency for the Cooperation of Energy Regulators (ACER) in Ljubljana on March 3, 2011.¹⁶ So this line of action of the Russian side (aimed at receiving

derogations from provisions of the Third Package rules for Russian contracts and pipelines up to the delivery points for indefinite time) seems to be counterproductive. The only valid points for discussion here seem to be, in the author’s view, the timing and the mode of transition to the new EU rules of the existing Russian contracts, including, inter alia:

- conservation of provisions of acting Russian long-term gas export contracts (LTGEC) until their contractual terms expire;
- application of the Third Energy Package rules only to new contracts (without forced termination of acting Russian LTGEC);
- adaptation of transportation regime of the Third EU Energy Package to justified concerns of Russian party.
- Regarding Gazprom’s attempts to receive exemptions from mandatory third party access (MTPA) for its new infrastructure projects in the European Union (South Stream, OPAL, NEL, etc.). They reflect Gazprom’s justified intention to provide bankability for these projects (see below) on the basis of the mechanism of receiving exemptions provided in arts 35–36 of Directive 2009/73. This set of issues is probably a prerogative of the newly established working group set up recently by A. Miller and G. Oettinger. On November 2, 2010 Gazprom has published information that:

“Alexey Miller and Guenther Oettinger agreed to form a joint working group with a view to regularly discussing the implementation of the Third Energy Package and the influence of this legislative initiative on the fulfillment of Gazprom’s long-term contracts”¹⁷.

This working group can deal with the particular issues related to the implementation of the specific investment infrastructure projects undertaken by Gazprom within the EU territory under new legislative and regulatory rules of the Third EU Energy Package, including achieving by these projects the priority status within the European Union.

¹⁶ <http://www.agenceurope.com/EN/index.html> [Accessed November 10, 2011].

¹⁷ <http://www.gazprom.com/press/news/2010/november/article105015/> [Accessed November 10, 2011].

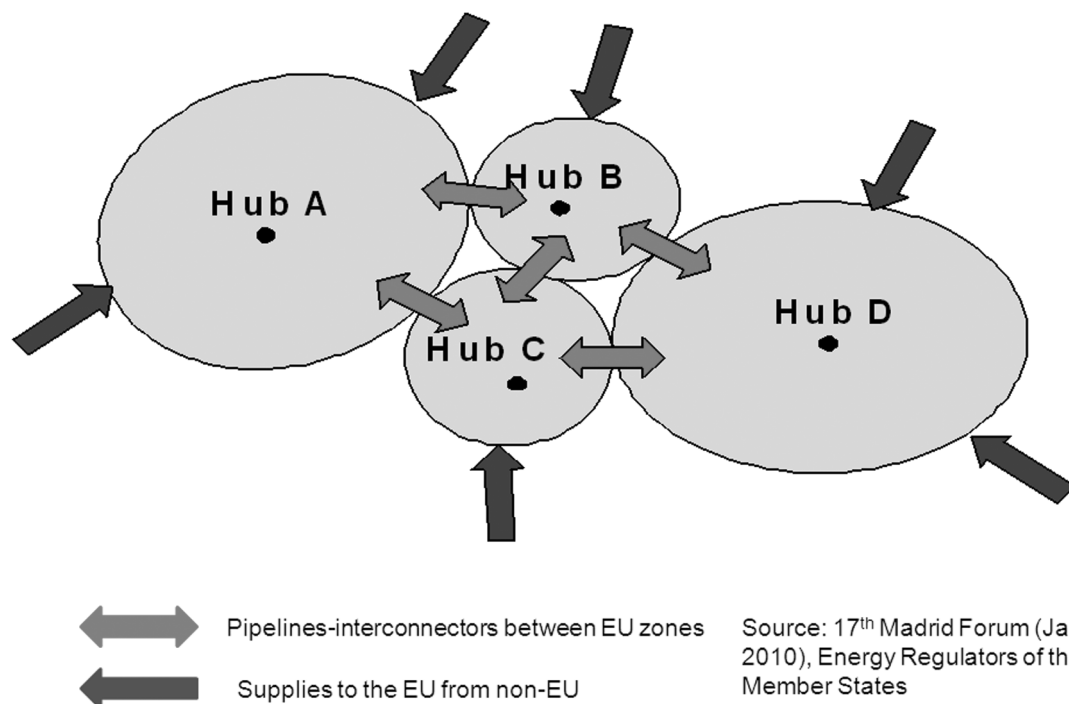
- Regarding the new prospective mode of business activity of the Russian side within the unbundled EU gas market—only as a shipper. In this case the following issues became the key ones: formation of the effective architecture of the internal EU gas market which will not create unjustified incremental risks and threats for suppliers and consumers of gas within the European Union, and effective functioning of the EU gas market during its transition to this new model (architecture). Russia's intention is to participate, together with EU Institutions, in forming comfortable—for ALL participants of the cross-border gas value chains—rules of the game in the emerging EU gas market aimed at the final

unbundling of the gas supply and gas transportation business. Gazprom under this model will change its status within the European Union and will stay to work only as supplier/shipper inside the European Union. Our consultations are aimed at reaching mutual understanding within this—third—line of action and will concentrate, most probably, on these particular issues.

Future architecture of the EU internal gas market according to the Third EU Energy Package

The current EU vision of the future architecture of the internal EU gas market is presented at Figure 1.

Figure 1. Future organisation of the common internal EU gas market according to the third EU energy package



Source: 17th Madrid Forum (January 2010), Energy Regulators of the EU Member States

In the author's view, there are two more important characteristic features of such market design that need to be mentioned in this regard. First, contrary to a generally accepted (although incorrect) perception of not only the non-professional audience, but also of part of the audience that considers itself to be a professional one, the future internal EU gas market is not designed (even at the level of an economic model) and is not to be developed (at least in the foreseeable future) as a single (homogenous) market area. Thus, secondly, the internal EU gas market is designed as a combination of market areas, all of them to be organised as entry-exit zones with virtual hubs. The driving intention of such market(s) design is quite fair

and well understood—to move towards uniform capacity allocation mechanisms (concept of “bundled products”) and gas pricing mechanisms (concept of “liquid hubs”).

But natural questions have arisen in this regard which the Russian experts at the bilateral consultations, have started already to discuss, among other topics of mutual interest, with our EU counterparts since early 2010. Here are just few of them:

- Capacity allocation: short-term v long-term? At zone borders? At hubs? Bundled products—only on volumes (of throughput capacity) or on duration of access (to this throughput capacity) as well?

How to overcome inconveniences of the Third Energy Package in this regard which seems to be based on and is being supportive for mostly “short-termism”?

- Access to transportation infrastructure: how mandatory third party access (MTPA) correlates with the principles of project financing and how best to find an equilibrium between the rules of competition in trade (where MTPA is one of the basic pillars) and adequate stimuli for investment in development and modernisation of infrastructure (where MTPA is one of major barriers).
- Gas pricing at hubs: on all gas volumes traded in/supplied to Europe or just on a portion of gas supplies? When European hubs would become really liquid? All or only few of them? Which ones? And whether liquidity of virtual hubs does really matter?

These issues will be addressed in more detail below.

Generally speaking, the above mentioned characteristic features of the EU energy legislation development (such as unbundling trends—from operational to legal unbundling, third party access trends—from negotiatory to mandatory TPA, commoditisation of energy trade—from long-term contracts with indexation formulas to spot/futures trading) which, on the one hand, have been presented by the Commission (especially by the DG COMP) as great advantages of the legal trends in EU energy developments from the First (1996/1998) to the Third (2009) Energy Directives, has raised, on the other hand, a number of questions regarding the growing imbalance between stimuli for trade and stimuli for investments and increasing discrimination of investment stimuli for both internal EU energy investors into internal EU energy infrastructure as well as for non-EU energy investors into EU-oriented energy infrastructure:

- segmentation of vertically integrated companies (unbundling) leads to the creation of a “contractual mismatch” problem (risk of missing duration and volume targets in long-term supply and transportation contracts);
- introduction of mandatory third party access (MTPA) to gas transportation infrastructure puts under question the bankability of investment projects (MTPA discriminates project financing);
- switch from LTGEC to spot and futures trade (commoditisation of gas trade) increases price volatility and diminishes

price predictability and thus price has been losing its guidance for long-term and capital-intensive investment decisions.

Export of the EU energy acquis & its instruments

It seems that the design of the EU gas market is based on the Anglo-Saxon model, well-developed in the global oil market and in the US and the UK gas markets.¹⁸ As was mentioned above, in the global oil market the price of oil does not reflect any more supply-demand balance in physical oil but reflects supply-demand balance in oil-related financial derivatives, and this is why the oil price (or its spot/futures quotations, or its forward curves) no longer serves as guidance for project financing, and its volatile fluctuations also do not provide any clear guidance for project financiers regarding pay-backs on their prospective investments.

This is one of the reasons for under-investment in global oil in the 1990s (when the Anglo-Saxon model began to dominate in global oil) which has resulted in escalation of oil exploration, development and production costs worldwide during the following decade (it was innovations that lead to the cost decrease, and they are brought by investment into capital stock) and has stimulated price increases at the beginning of the century. These increases were supported by Chinese and Indian oil demand and then spiraled further, fuelled by the huge inflow of liquidity into the paper oil market through different financial instruments such as index and hedge funds, etc. on the expectations of further oil price growth. Today, one of the key investors in the paper oil market is the so-called “Belgian dentist” who can invest in paper oil through such financial instruments as “easy-to-invest” derivatives.

If this is the desired outcome of the “designed model” of the future architecture of the gas market in broader “energy Europe” and the whole of Eurasia, there are objective concerns about how secure, stable, predictable and financeable such gas market will be for both the producers (especially for non-EU producers/exporters) and for EU end-users. Nevertheless, the European Union has been exporting its legal model for energy to the non-EU states with a clear, clever and straightforward policy which has its different instruments at the different stages¹⁹:

- First EU Gas Directive (1998)—Energy Charter Treaty (1994/98);
- Second EU Gas Directive (2003)—Energy Community Treaty EU-SEE (2006); and

¹⁸ The author assumes that it is DG ENERGY, part of former DG TREN, that takes care of the sector specific regulation, and DG COMP that enforces the competition law aspects of market opening, who are both holding “the drivers wheel” in developing this “designed market” in gas further in Continental Europe and thus in broader “energy Europe”. But it seems that among these two formally equal DGs, the DG COMP has been “more equal” than former DG TREN and current DG ENERGY.

¹⁹ See in more detail A. Konoplyanik, “A Common Russia-EU Energy Space (The New EU-Russia Partnership Agreement, Acquis Communautaire, the Energy Charter and the New Russian initiative)”, Section 2.1 (pp.45–101) in EU — Russia Energy Relations, Legal and Political Issues— (Brussels, Belgium: Euroconfidential), January 2010.

- Third EU Gas Directive (2009)—“Third party clauses” of Directive 73/EC/09 with sanctions for violation of the Directive’s provisions (up to 10% of global turnover of mother company)

The key multilateral instrument of export of EU energy *acquis* based on the First EU Energy Directives (1996/1998) was the Energy Charter Treaty (ECT) signed in 1994 and entered into force in 1998 which was developed, *inter alia*, in line with and at the same time as the development of the First EU Energy Directives.²⁰

The Second EU Energy Directives (2003) further developed the key EU legal concepts in energy such as TPA, unbundling, etc. towards more liberalised EU energy markets. This demanded another instrument for exporting the EU energy *acquis* based on the Second EU Directives since the ECT did not manage to play this role any more—ECT provisions stayed below the new legal standards established in 2003 within the European Union by the Second Energy Directives. This is why the European Union since then has been steadily losing its practical interest in the ECT and in supporting ECT developments, despite its continued political statements in support of the ECT. After 2003 the new multilateral legal instrument to substitute the ECT as a key instrument of exporting EU energy *acquis* became the Energy Community Treaty between the European Union and the countries of the South-East Europe.

The Third EU Energy Directive (2009) has presented a different instrument of exporting EU energy *acquis*. It is no longer based on instruments of international law, but on a system of internal instruments incorporated into the Directives which uses the current high level of interdependence between the EU market and non-EU energy suppliers. The Third EU Energy Directive presents a system of methods to force (stimulate) the non-EU states/companies to play according to the EU internal rules even in their own non-EU domestic markets. Through its “third parties clauses” the Directive requests that all foreign companies willing to operate at the internal EU market (at least as an investor/owner/operator of energy infrastructure and a supplier to this market) need to be organised in their mother countries according to the internal EU rules in their most radical version, e.g. presented by the Third Directive, which means legal

unbundling, MTPA, etc. In case this does not happen, corresponding companies, according to the art.41.4(d) of Directive 2009/73, could be penalized “up to 10% of the annual turnover of the vertically integrated undertaking” which means (is intended), as it was explained to us by our European colleagues during the informal consultations, the 10 per cent of the global annual turnover of the mother-company of the vertically integrated undertaking. In the case of, say, Gazprom, this would mean 10 per cent of the global annual turnover of this mother company as a whole.

For a number of years, starting with the author’s tenure in the Energy Charter Secretariat, when/where we have organised the process of bilateral informal consultations between energy experts of Russia and the European Union (with participation of the ECS staff-members) on the outstanding issues of the draft Energy Charter Protocol on Transit,²¹ there has been one particular issue that has remained undiscussed in substance.²² Our colleagues from the Commission have not been in a position to accept the invitation from the ECS (within the multilateral Energy Charter process), nor from Russian experts (within different bilateral formats) to organise a debate on how internal EU law (*acquis communautaire*) corresponds with international law provisions (ECT, Russia-EU Partnership & Cooperation Agreement, etc.), especially regarding their investment protection clauses. One of the key points for the proposed discussion is the following: for the European Union as a whole its *acquis communautaire* is an internal domestic legislation. This means that the international treaties, to which the European Union as a whole is a party, dominate over EU domestic legislation in cases of conflict between their respective provisions. The European Union as a whole is a Contracting Party to the ECT (as well as its individual Member States). This means that in case of legal conflict/collision, ECT provisions should dominate over provisions of the Second and/or Third EU Directives.

The invitation is still open for our European colleagues to discuss these legal issues in details in order to reach clarity and mutual understanding on them, to diminish the “grey zone” of potential misunderstanding and of different interpretations on the correlation between internal EU legislation (which influence justified economic interests of the non-EU energy-exporters to the

²⁰ See, for instance: A. Konoplyanik, T.W. Waelde, “Energy Charter Treaty and its Role in International Energy”, (2006) 24(4) *Journal of Energy and Natural Resources Law* (November) 523.

²¹ See a series of this author’s publications on this at <http://www.konoplyanik.ru> and especially, on results achieved during this consultation, in A. Konoplyanik, “Gas Transit in Eurasia: transit issues between Russia and the European Union and the role of the Energy Charter” (2009) 27(3) *Journal of Energy and Natural Resources Law* (August) 445.

²² This open issue resulted from the different views of the EU and Russian delegations on the art.20 of the draft Transit Protocol (TP), the so-called “REIO clause” (for more details, see this author’s publications mentioned in the previous footnote). As an aside, discussions on the Third EU Energy package have led the author to the following thoughts. Draft Art.20 of TP, presented by the EU in 2003 but never since agreed upon by Russia, has proposed that under the Transit Protocol definition, “transit” (contrary to its definition in ECT art.7), should mean crossing over the territory of the REIO as a whole (the only REIO under the ECT is the EU), and not the territory of each Contracting Party (as in ECT art.7), while the latter means crossing the territory of the EU and/or every single EU Member State. The major argument of the Commission’s representatives at the draft TP consultations was always the following: the EU has been developing its single internal market and this is why “transit” should be considered as crossing of the whole territory of the EU (there should be no transit inside the homogenous EU). It seems to me that now this argument can be argued against based on the Commission’s view of the target model of the EU internal gas market which develops not a homogenous single EU market area, but an internal market consisting of combination of market zones. This is another argument against the so-called “REIO clause”(draft art.20 TP) proposed by the EU.

European Union) and the international treaties to which both the EU and such non-EU energy-exporters to the European Union are the parties.²³

We shall now address in more detail some key problems of the Third EU Energy package from the non-EU EU-oriented exporter's viewpoint, to explain their underlying economics, and to indicate, where possible, some possible draft solutions which sovereign EU legislators might wish to consider while drafting and approving Framework Guidelines and Network Codes related to the Third EU Gas Directive.

Contractual mismatch problem: to provide long-term access to transportation capacity

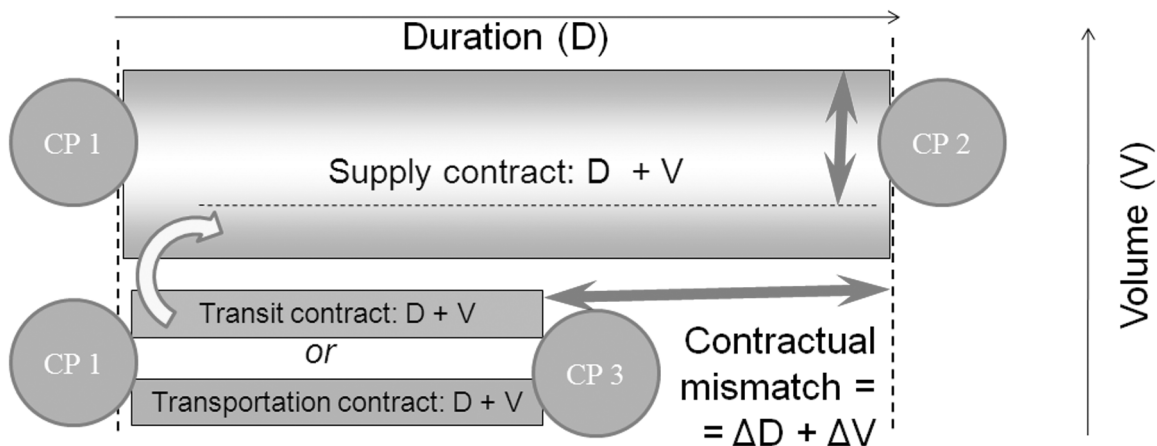
The first problem to be mentioned is the problem of the so-called "contractual mismatch". This problem was created by the development within the European Union of the concept of "unbundling" of the vertically integrated companies. Within the "bundled" gas markets (prior to implementation of the "unbundling" concept) a gas company (usually a "vertically integrated undertaking", if the terminology of the EU Energy Directives is used) was both producing gas and transporting it through

pipelines (which the company had usually constructed and raised the finance for) and operating afterwards. This enabled this "vertically integrated undertaking" to control and to be fully responsible for gas flows from the well-head to the delivery points within its internal management structure. Such an approach minimises risks and the cost of gas deliveries to consumers²⁴.

After the concept of "unbundling" (forced segmentation of vertically integrated companies) was put into place, producing companies no longer had the right to own/control the pipelines through which they deliver their gas to their consumers. This predetermined the necessity of possessing two contracts between two pairs of different contracting parties in order to provide gas delivery from the well-head to the delivery point:

- a supply contract between a gas producer/exporter/seller, CP1 at Figure 2, and a buyer/importer (usually a wholesale buyer, not necessarily the end user), CP2 at Figure 2; and
- a transportation contract between a gas producer/exporter/seller, CP1 at Figure 2, and an owner/operator of transportation capacity, CP3 at Figure 2.

Figure 2. Contractual mismatch problem



Contractual mismatch: between duration/volumes (D/V) of long term supply/delivery contract (LTGEC; CP1-CP2) and transit/ transportation contract (CP1-CP3); the latter is integral part to fulfill the delivery contract => risk non-renewal transit/ transportation contract => risk non-fulfillment supply/delivery contract.

Core issue: guarantee of access to/creation of adequate transportation capacity for volume/duration of long term contracts

²³ The most recent informal invitation to the Commission to discuss these issues at non-politicised expert level with the aim of creating better understanding between the experts or at least narrowing the gap in understanding was made during the consultations between Russian experts and representatives of energy regulators of the EU Member States with participation of representatives of the Commission. The answer from the Commission has not yet been received.

²⁴ See, for instance, clarification of this in regard to the Soviet/Russian gas export contracts in A. Konoplyanik, "Russian Gas to Europe: From Long-Term Contracts, On-Border Trade, Destination Clauses and Major Role of Transit to ...?" (2005) 23(3) *Journal of Energy and Natural Resources Law* 282.

The necessity of possessing two contracts between two different pairs of contracting parties means that both supply and transportation contracts need to be mutually correlated both in terms of volume and duration in order to make delivery operable. This means that both the duration and volume of the (usually) long term supply/delivery contract (LTGEC) between CP1 and CP2, on the one hand, and the transit/transportation contract between CP1 and CP3, on the other, need to correspond to each other, including their start and end-dates. The transportation/transit contract is an integral part of fulfilling the delivery contract obligations. If the duration of the transportation/transit contract is shorter (and/or its volumes are lower) than that of the corresponding LTGEC then the supplier (CP1) faces the risk of non-renewal of his transit/transportation contract when it expires while his LTGEC is still in place. This might create the risk of non-fulfilment of his supply/delivery contract (LTGEC of CP1). This means that the core issue in this regard is the issue of long-term access to transportation capacity or a guarantee of access to/creation of adequate transportation capacity for the full volume/duration of corresponding long term contracts.

Current EU Energy legislation is driven by short-termism within the legislator's intention to create a liquid internal EU gas-trading market. This is why duration of access to transportation capacity within the European Union tends to be shorter than needed for fulfilment of LTGEC.

A normal duration for a long-term contract is considered to be from 20–25 years (Kim Talus²⁵) to around 25–30 (Klaus Schafer²⁶) years. According to the study made by Christian von Hirschhausen and Anne Neumann,²⁷ average duration of LTGEC to EU, both pipeline and LNG, signed in a given particular year, has diminished from 30 in 1980 to 15 in 2004.²⁸

A general starting point for the duration of a long-term contract could be considered 10 years or more according to K. Talus.²⁹ This is also reflected in art.2(1) of Directive 2004/67.³⁰ Since LTC is an instrument of project financing, its minimum duration means the minimal time needed to recoup the investment into an upstream project (gas production plus transportation) and, in a simplified version, a 10-year long duration would mean approximately 10 per cent annual internal rate of return (IRR). Should higher IRR be accepted by the investor, the general starting point for the duration of the long-term

contract would be lower. But I would not assume that in upstream oil and gas projects the generally accepted IRR for project financing purposes would be accepted by the project investors at higher than 15 per cent. This means that the general starting point for the duration of a long-term contract would not be lower than seven years (see Figure 2). Moreover, we have recently heard about the debate in Germany on providing for the upper limit of IRR in infrastructure investments to be equal to 5 per cent. This will further expand the minimum duration of the pay-back period for investments in such infrastructure to approximately 20 years. To summarise: 7–10 years would be an approximate minimum duration of the LTGEC from an economic point of view (which might be further increased within the “designed market”)—as defined by the duration of the pay-back period of upstream investment projects in oil and gas.

But art.2.1.14 (Definitions) of Regulation 715/2009 says that “‘long-term services’ means services offered by the transmission system operator with a duration of one year or more”.³¹ This means that it might be possible (the risk does exist) that transmission system operators will provide for the holder of a, say, 15-year-long LTGEC who is seeking access to the transportation facilities to implement its LTGEC, a shorter access to its infrastructure, say, only for five years. This will create the problem of “contractual mismatch” regarding the duration of the supply and transportation contracts (not yet taking into consideration another component of the equation—correlation between the volumes of both contracts).

Do solutions to this problem exist? The author sees two options for solving the issue with two different types of solutions reflecting two different approaches:

- to find a solution for the problem of “contractual mismatch” where it already exists (when it was not possible to prevent its appearance);
- to find a solution as to how to prevent the very appearance of the problem of “contractual mismatch”.

In the first case, when the “contractual mismatch” problem does exist (if only short-term capacity products are available, i.e. which are shorter than the duration of corresponding supply contracts), the well-known solution is a so-called “Right of First Refusal” which has been

²⁵ Kim Talus, *Vertical natural gas transportation capacity, upstream commodity contracts and EU competition law* (Kluwer Law International, 2011), p.8.

²⁶ Klaus Schafer, “Natural gas markets in Europe — Challenges and developments, presentation at the ONS 2010 — Secure Sustain Supply Conference, Stavanger, August 25, 2010.

²⁷ Christian von Hirschhausen and Anne Neumann, “Less Long-Term Gas to Europe? A Quantitative Analysis of European Long-Term Gas Supply Contracts” (2005) 3(1) OGEL (March).

²⁸ At first glance, these figures (Talus's and Schafer's, on the one hand, and Hirschhausen's and Neumann's, on the other hand) do not coincide with each other, but this is only at first glance, since average duration of the LTGEC in a given year reflects both the contracts with generally shorter duration signed this year and contracts with generally longer duration signed in previous years. So the average duration of the LTGEC existing in the given year is longer than the duration of LTGEC signed this same year.

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³⁰ Council Directive 2004/67/EC of 26 April 2004 concerning measures to safeguard security of natural gas supply [2004] OJ L127/92.

³¹ Regulation 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation 1775/2005 [2009] OJ L211/40.

rather broadly used worldwide within different gas market structures (such as, for instance the US and/or the CIS gas markets). It is quite appropriate for suppliers, but seems to be incompatible with the EU acquis; at least that was the opinion communicated by the representatives of the European Commission to the participants in the Russia-EU bilateral informal expert consultations on the Energy Charter Protocol on Transit (with participation of the ECS experts) in 2004–2007.³²

In the second case, a draft solution within the legal framework of the Third EU Energy package that will prevent the appearance of the “contractual mismatch” problem needs to provide availability of long-term capacity allocation products. This means that so-called “bundled capacity products” (as designed in art.F2.4.2 “Bundled products” of the Pilot Framework Guideline on Capacity Allocation)³³ needs to refer not only to volumes, but to duration as well. This means that a two-dimensional model of “bundled capacity product” (taking into consideration both its volume and duration) needs to be developed within the corresponding Network Code and an “action plan” which needs to be laid down by this Code.³⁴ The draft procedure on how to escape the contractual mismatch problem while providing access to available transportation capacities (which central element is the so-called “open season” mechanism) was jointly developed by Russian and EU experts during RF-EU informal bilateral consultations on the Energy Charter Protocol on Transit in 2004–2007³⁵ and its modernised version (as a regularly repeated procedure of testing market needs for transportation capacities linked to the 10-year network development plan of the EU gas infrastructure) was presented by the Russian party to the participants of the informal expert consultations between Russia and EU experts in June 2010. It is a sovereign right of the EU legislators whether to incorporate this mutually acceptable “joint product” into EU legislation or not.

“Here, there is a need to consider the long-term nature of the natural gas business. With the move towards shorter and shorter TPA services, the risk of assimilation of short-term trading and price arbitrage and long-term investment based reservations is looming. Different transactions have a different economic rationale. Given that long-term commodity contracts continue to play a role in the EU natural gas supply, there is a need for long-term capacity contracts matching the commodity contracts. If this is accepted, long-term should be comparable to the economics of the commodity contract. One way of doing this is to allow the shippers to book consecutive multi-year capacity services.”³⁶

Conflict with project financing principles—derogations from MTPA

It is well known that what is good for liquid trade is not always as good for project financing, especially when long-term capital-intensive investment projects (such as upstream projects in gas) are at stake. This refers to the mandatory third party access to fixed, immobile energy infrastructure: MTPA is considered as one of the prerequisites of liquid trade in open competitive markets and at the same time MTPA is de-stimulating project financing (at least at the stage when the capital investment into construction of transportation infrastructure is not yet recouped by the sponsors of the project) which, in turn, is a prerequisite of creating incremental supplies to end-user markets as the economic background for developing open and competitive markets and liquid trade. It is rather well known that today about 70–80 per cent of project investments in upstream oil and gas are raised as debt financing on the international capital markets. This means that the rules of project financing need to be respected in order to escape the under-investment problem. This relates to the issue of “third party access” as well.

Generally speaking, there are two major options regarding TPA: to possess TPA and not to possess it. Both are valid legal concepts. In the first case (without TPA) there are no problems with project financing rules and the infrastructure projects thus would be easier to finance (more bankable). In the case of availability of TPA within the legal system of the country in question the picture is not so simple regarding project financing (bankability of the projects).

In this case it is much easier and more straightforward for project financiers to finance the infrastructure projects when the “negotiated TPA” does exist within the legal system. The parties to the project can negotiate the necessary duration of the period when no TPA is allowed to the transportation capacity which was financed and constructed and is then being operated by the project sponsors (usually by “vertically integrated undertakings”). This period of “no TPA” might cover either part or the whole life-cycle of the transportation project and this will not be in contradiction of the existing legislation.

That was the case with the First EU Energy Directive (which allows “negotiated TPA”) and with the Energy Charter Treaty which has specially mentioned in Understanding 4.1(b)(i) that “The provisions of the Treaty do not oblige any Contracting Party to introduce

³² See corresponding publications and presentations at <http://www.konoplyanik.ru> [Accessed November 10, 2011].

³³ ERGEG. *Capacity Allocation on European Gas Transmission Networks, Pilot Framework Guidelines*. Ref: E09-GNM-10-05, December 10, 2009.

³⁴ “... The network code shall lay down an action plan to realize bundled products ... This plan shall include a timetable.” (ERGEG. *Capacity Allocation on European Gas Transmission Networks, Pilot Framework Guidelines*. Ref: E09-GNM-10-05, December 10, 2009, art.F2.4.2 “Bundled products”).

³⁵ See its description in A. Konoplyanik “Gas Transit in Eurasia: transit issues between Russia and the European Union and the role of the Energy Charter” (2009) 27(3) *Journal of Energy and Natural Resources Law* (August) 445.

³⁶ Kim Talus, *Vertical natural gas transportation capacity, upstream commodity contracts and EU competition law* (Kluwer Law International ,2011).

mandatory third party access”.³⁷ So both the First EU Energy Directive (1996/1998) and the ECT (1994/1998) were compatible with project financing principles.

Everything has changed since the Second EU Energy Directive came in force in 2003 which introduces mandatory TPA as the only type of TPA within the European Union and the states that implement the EU energy acquis (such as the states of South-East Europe since 2006 when the Energy Community Treaty between them and the European Union was adopted, and also Moldova and Ukraine since 2010 when these two countries joined this Treaty). The Third EU Energy Directive (2009) has reconfirmed MTPA as the only type of access to transportation infrastructure within the European Union. But, as was mentioned above, MTPA de facto prohibits project financing. So the EU legislators were clever enough to understand and foresee this; both in the Second and Third Directives they made special provision allowing derogation from MTPA on a project-based basis, albeit through rather complicated and lengthy procedures described (as to gas) in arts 21–22 of the Second and arts 35–36 of the Third EU Gas Directives. This solution opened the door for project financing of the infrastructure projects within the European Union: all major capital-intensive gas projects in the European Union (at least two pipelines-interconnectors and seven LNG import terminals, as of two years ago) were financed and developed on the basis of such derogation from the EU legislation. But this solution has its negative effects: based on “presumption of guilt” of the project company asking for derogation from the EU rules, the procedures of arts 21–22 in the Second (and of corresponding arts 35–36 in the Third) Energy Directive are rather lengthy and complicated. Just one example: it took 28 months for the Nabucco project company to receive derogation from MTPA, which was longer than it took for Turkmenistan and China to sign an agreement, to invest and to build the Turkmenistan-Uzbekistan-Kazakhstan-China pipeline. Bearing in mind that the Nabucco project is the “best loved child” of the European Commission, it would not

be improper to suggest that all the procedures regarding this pipeline have been gone through much quicker than will happen with any other project. But the whole legal construction seems to be irrational when the justified precondition for the investment decision is first forbidden by law and then the project company needs to prove its justified considerations (in order to start financing the project aimed at either bringing a new source of supply or developing a new supply route for the EU market, in both cases improving supply security of the latter) within the general “negative attitude” of the Commission towards granting any derogations from the EU acquis at all. This in the end decreases the global competitiveness of EU projects and companies within the discounted cash flow (DCF) based comparisons, since more lengthy procedures mean more costly projects in DCF terms.

Gas pricing: which way to go in Continental Europe?

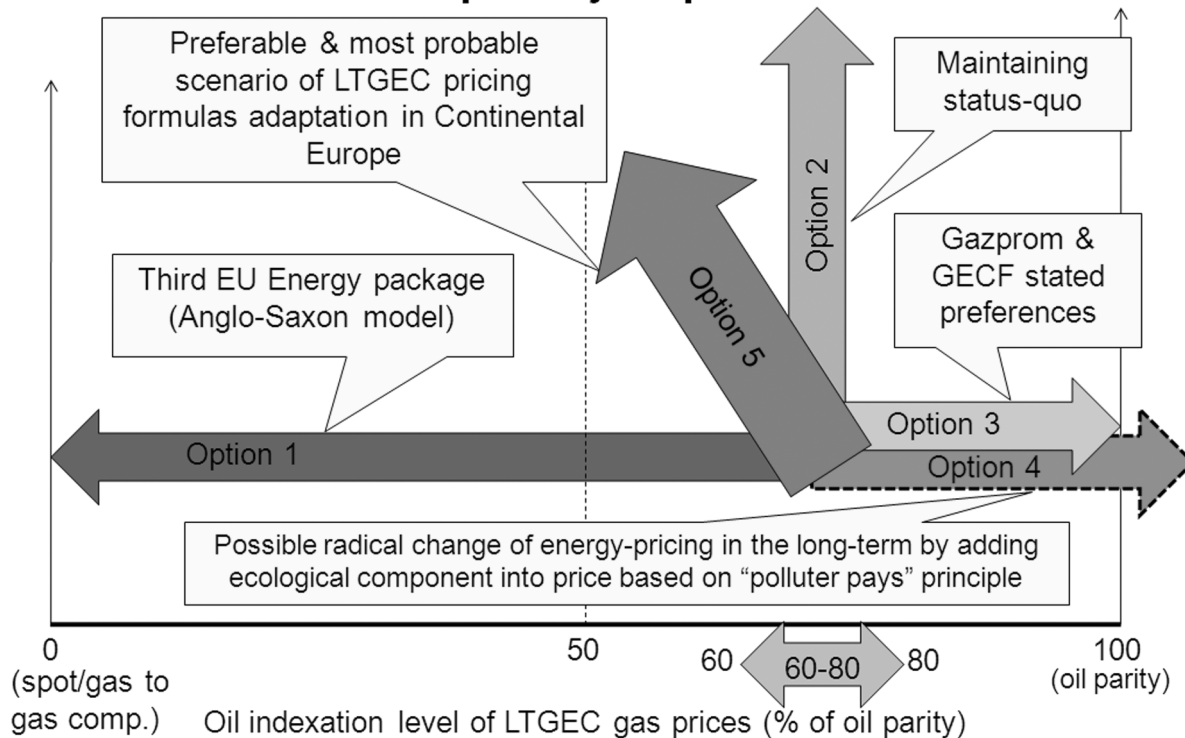
Within the current debate on future trends in gas pricing mechanisms it is possible to identify five major routes (see Figure 3) of possible changes in the currently dominant gas pricing mechanism in Continental Europe (which is oil-indexation formulae pricing within LTGEC of the so-called Groningen type³⁸):

- switch to overall spot/futures pricing within the EU internal gas market;
- maintaining status-quo (staying with current LTGEC with oil-indexation formulas);
- moving from current gas-to-oil price ratio equal to 0.6–0.8 to gas-to-oil parity;
- possible radical change of energy-pricing in the long-term when gas price might even exceed oil parity;
- adaptation of current LTGEC with oil-indexation formulas in line with historical evolution of the concept “net-back replacement value of gas alternatives at the end-user market”.

³⁷ *The Energy Charter Treaty and Related Documents*, (The Energy Charter Secretariat, 1996), p.26.

³⁸ For more details of this mechanism, see *Putting a Price on ENERGY: International Pricing Mechanisms for Oil and Gas* (Brussels: Energy Charter Secretariat, 2007); A. Konoplyanik, “Evolution of gas pricing in continental Europe: a view from Russia (Modernization of indexation formulas versus gas-to-gas competition)” (2010) 021 OGEL (June).

Figure 3. Evolution/adaptation of gas pricing mechanisms in Europe: major options



Go to spot/futures pricing?

This is a preferred option for the Commission which is incorporated into the future vision of the architecture of the EU internal gas market (regional zones with liquid hubs, as presented above, see Figure 1). This is the Anglo-Saxon model designed for Europe by the Third EU Energy package which is intended to be infiltrated within the broader "energy Europe" through the concept of "export of EU energy acquis".

But, first of all, currently the European gas hubs are not liquid at all. There is a special parameter called "churn" which is used to measure the level of liquidity of the marketplace.³⁹ It is generally accepted that the break-even churn level for the liquid marketplace is equal to 15. All the marketplaces with lower churn levels are definitely non-liquid. Only after their churn began to

exceed the level of 15 could this marketplace be considered to have become relatively liquid with the level of liquidity growing further with the churn level increase.

All the hubs of Continental Europe are characterised by the churn level measured in single digits—at best from three to five and lower in many cases (see Figure 4). Only the churn of the United Kingdom virtual hub (National Balancing Point—NBP) has been fluctuating around the marginal level of 15, mostly approaching this level from below. This means that none of the European hubs is ready today to become either the "European Henry Hub", nor to present price levels for even local (regional) markets free from possible manipulations (the lower the churn/liquidity level of the marketplace, the higher probability that its price can be manipulated). So their prices cannot be considered yet fully robust and reliable enough.

³⁹"Churn" is the commonly used parameter for measuring liquidity level of marketplaces defined as the ratio of traded volumes to physical gas deliveries from the marketplace after trades.

Figure 4. Liquidity of European gas hubs (churn ratio)

	2007	2008	2009
United Kingdom: National Balancing Point (NBP)	13.5	14.4	14.5
Belgium: Zeebrugge (ZEE)	5.1	5.0	5.0
Austria: Central European Gas Hub (CEGH)	2.6	2.9	3.0
Netherlands: Title Transfer Facility (TTF)	3.7	3.2	3.0
Italy: Punto di Scambio Virtuale (PSV)	1.7	2.0	2.1
Germany: NetConnect Germany (NCG, EGT prior 2009)	1.6	1.8	2.1
Germany: GASPOOL (BEB)	-	-	2.2
France: Point d'Echange de Gaz (PEG)	-	-	1.2

For comparison:

USA (oil): NYMEX (WTI) (Feb.2010) **1680-2240**

UK (oil): ICE (Brent) (Feb.2010) **2014**

USA (gas): NYMEX Henry Hub (av.2009) **377**

Break-even churn level for liquid marketplace **15**

Churn is the commonly used parameter for measuring liquidity level of marketplaces; defined as the ratio of traded volumes to physical gas deliveries from the marketplace after trades

Source: "Gas Matters", IHS-CERA, IEA, M.Kanai (ECS)

Today's level of US Henry Hub liquidity exceeds the most liquid European hub (UK NBP) by more than 20 times, and all gas hubs are less liquid than key oil marketplaces (like NYMEX and ICE) with their churn levels measured by five-digit figures and exceeding 2,000 (see Figure 4). How long will be needed for European hubs to reach the level of liquidity of the United States "Henry Hub" (to say nothing about the liquidity level of oil exchanges)? But even when (if) the liquidity levels of the European gas hubs equalise with the US Henry Hub, would it be proper to shift all contractual structures in Continental Europe to spot pricing, bearing in mind the above-mentioned objective differences between the US and UK gas markets, on the one hand, and the Continental European and broader Eurasian gas market, on the other hand? The author's answer would be "no", mostly because, as already mentioned above, the highest possible level of liquidity has its own negative features since it opens the floor for non-energy speculators to dominate in the energy paper markets which, in turn, increases volatility and decreases predictability of energy prices. And this is to the detriment of all the actors in the physical energy value chains.

To maintain status-quo?

Today the dominant type of gas pricing in Europe is the oil-indexation formulas within LTGEC of the Groningen type. Three-quarters of the gas pricing basket in the European Union refers to two petroleum products: light fuel oil (gasoil and diesel) and heavy (residual) fuel oil

(LFO and RFO). For major gas exporters to the European Union (Russia, Norway, The Netherlands) this ratio is even higher—around 90 per cent with the same two products (LFO and RFO) dominating. But one needs to remember that oil indexation was established initially in The Netherlands in 1962 in the original Groningen contract. It has reflected the concept of "replacement value for gas in the end-use" and at that time LFO and RFO have been presenting replacement fuels for gas in households (LFO) and in industry and electricity generation (RFO). Since that time the spectrum of replacement fuels for gas in different sectors has been expanding, but the contractual formulas have still been fixed to LFO and RFO. This means that the gap has been increasing between the economic substance of the "replacement value formulae" and its contractual embodiment, especially after the 1970s, when after the oil shocks both LFO and RFO began to lose their competitive niches in their respective areas, especially RFO which is no more a dominant fuel both in industry and in electricity generation. To maintain the status quo in the given circumstances means to further deviate from economic substance of the "replacement value" concept presented in the LTGEC of the Groningen type.

Another argument which is provided by the supporters of staying with oil indexation is the following. In their view, this helps to escape gas price manipulations by the gas actors since oil-indexed gas price is linked to the price of oil which is developed at the most liquid and global market. However, for the reasons set out below, this

argument is flawed. First, deviation of oil pricing from oil fundamentals links the gas price to the price of the commodity which is established by the non-oil speculators as a virtual price with high volatility. Secondly, it seems that the oil price established at the commodities exchanges can be manipulated as well, for example by the investment banks who are the key actors on oil derivatives markets. So despite escaping possible manipulations of the gas price by gas actors by linking it to the oil price, established at the commodities exchanges through the trade in oil-related financial instruments, we thus just jump into real manipulations of the oil price by non-oil financial speculators. So what is and where is the benefit of this change?

The author's conclusion is that we need not to maintain the status quo, but slowly to adapt the current pricing structure in line with its historical evolution, which will be discussed further below.

To stay with oil indexation and to reach oil parity

Moving from current gas-to-oil price ratio fluctuating within the 0.6–0.8 range⁴⁰ to oil parity (when gas-to-oil price ratio is equal to 1.0) is the Gazprom's and Gas Exporting Countries Forum's (GECF) stated preference.

As was mentioned above, at the beginning of LTGEC history (in the early 1960s) gas replacement value was based on oil-indexation and was below oil parity. Since the 1970s, oil-indexation formulae remains in LTGECs (with the gas/oil price ratio fluctuating currently within the 0.6–0.8 range), but gas replacement value deviates further away from oil parity due to the diminishing role of oil indexation in the formulas (see below). Nevertheless, Gazprom continues presenting statements in support of oil indexation (as a stabilization factor of gas prices) and of reaching "oil parity" (in USD/BTU terms). Two recent GECF Ministerial Declarations (of April 19, 2010 and December 12, 2010) were in support of reaching "oil parity" (in USD/BTU terms). Most recently, the General Secretary of the GECF, Mr. L. Bokhanovsky, stated that:

"... general opinion is that gas is underpriced today, gas price does not correlate to its investment costs. US spot price is 4 USD/mmBTU, in United Kingdom — about 6 USD. Brent price is about 14 USD/mmBTU. Compared to oil, gas price is to be at least 2–3 times higher".⁴¹

There is, so it seems, only one technically possible way to stay within oil-indexed gas pricing and to reach oil parity. Since within the longer-term the price of RFO is approximately one-third below the crude oil price, and the price of LFO is about 15 per cent above crude oil price, to reach oil parity is technically (arithmetically) possible by almost totally removing RFO from the oil-indexation formulae and thus linking gas price only to LFO. But although being technically possible (at least theoretically), it is, first, violating the "replacement value" concept of gas pricing established in 1962 which has spread over the past 50 years throughout all "energy Europe"⁴². Secondly, it will be more than difficult to persuade the buyers of Russian gas to switch to this new gas pricing formulae, leading to price increases, especially nowadays when they are fighting with Gazprom and other gas exporters for price discounts. So this option is also a "no go" in practical terms.

To deviate from oil indexation and to exceed oil parity?

Coming back to the point above and to the Gazprom's and GECF's stated preferences for reaching or even exceeding "oil parity" by the gas-to-oil price ratio, the author would say that this aim might be possible to achieve in the event of possible radical change of energy-pricing in the long-term by, say, adding ecological components into pricing formulae based on the "polluter pays" principle. Since gas is the cleanest fossil fuel, it can obtain the lowest pre-tax price among its competitors (replacement fuels). In this case the number of ingredients in the pricing formulae will increase, its oil-indexation character will, on the contrary, decrease (because the new component will be of a non-oil character), but the final result might be the one desired by the gas producers/exporters (like Gazprom and/or GECF). It seems that the potential for this kind of development is now seriously delayed due to the failure of the Copenhagen December 2009 Conference on Climate Change. So this "option 4" is currently of a more theoretical nature. It might nevertheless be a valid point in the agenda of the further activities of GECF.

Adaptation of oil-indexation in line with historical evolution of replacement values

One can see a few dimensions of evolution of LTGEC pricing formula structure in Europe:

⁴⁰ В. Фейгин, В. Ревенков. *Природный газ в международной торговле: совершенствование традиционных методов ценообразования и новые подходы*. – Выступление на Международном научном семинаре "Современные рынки природного газа: барьеры и стимулы развития", Москва, РГУ нефти и газа им. И.М. Губкина, 24 ноября 2009 г. (V. Feygin and V. Revenkov, "Natural gas in international trade: modernization of traditional pricing methods and new approaches", (Presentation at the International scientific seminar "Modern natural gas markets: barriers and stimuli for development", Moscow, Russian State Oil & Gas University n.a. acad. I.M. Gubkin), November 24, 2009).

⁴¹ «Известия» ("Izvestiya" newspaper), December 3, 2010.

⁴² See: A. Konoplyanik, "The evolution of gas pricing: Europe & CIS" *Energy Economist*, Issue 347, September 2010, p.9; and in more detail: А.Конопляник. *Российский газ в континентальной Европе и СНГ: эволюция контрактных структур и механизмов ценообразования*. – ИИП РАН, Открытый семинар «Экономические проблемы энергетического комплекса», 99-е заседание 25 марта 2009 г. – Москва, Изд-во ИИП РАН, 2010 г., 102 с. (A. Konoplyanik, "Russian gas in Continental Europe and CIS: evolution of contractual structures and pricing mechanisms" (Moscow: Institute of Macroeconomic Forecasting, Russian Academy of Sciences, Open Seminar "Economic problems of energy complex", 99th meeting, March 25, 2009, IMF RAS, 2010), (in Russian)).

- from more simple to more complicated (non-dependent when contractual relations began to be implemented in the respective countries⁴³);
- the longer the history of contractual relation between the exporters and importers—and the more liberalised the importer's market—the more sophisticated is the pricing basket within the LTGEC and the lower is the oil-indexation ratio within the pricing formulae: it started from 100 per cent oil-indexation in the pioneering contractual structures (1962 Groningen, 2009 Russia-Ukraine), diminished to 95 per cent of oil-indexation in Eastern Europe, further diminished to 80 per cent in Western Europe, and finally diminishing to 30 per cent in the United Kingdom.

The general trend is clear: moving further away from oil parity towards diminishing oil-indexation in Continental Europe during the past 50 years—but in an evolutionary, not revolutionary manner. In the author's view, adaptation of current LTGEC with oil-indexation formulas in line with historical evolution of the concept “net-back replacement value of gas alternatives at the end-user market” is the preferable and most probable scenario of LTGEC pricing formula changes in Continental Europe and the broader “energy Europe” marked as “option 5” at Figure 3.

Based on this analysis of major options of future pricing trends in Europe, the possible/desirable evolution/adaptation of gas pricing and contractual mechanisms in the region are: to adapt mostly oil-linked gas price indexation in LTGEC by pricing formulas linked to a broader spectrum of parameters and non-oil gas replacement values (long-term capacity allocation must be simultaneously available to exclude contractual mismatch problems between supply and transportation contracts regarding both their volumes and duration).

Structure of supplies should/may be two-fold reflecting alternative proposals to the EU gas target model currently under development:

- long-term gas supplies (basic/base-load): more flexible and shorter-term LTGEC (plus access to transportation capacities

adequate to LTGEC volume and duration based on the “bundled products” formulae equal to “{n} x {1 year}” duration and “open season” mechanism of capacity allocation) plus “modified” gas replacement value formulas (with price indexation not limited to oil-pegging);

- short-term gas supplies (supplementary/peak- and semi-peak load): short-term (less than 1 year⁴⁴)/spot contracts plus futures quotations established at the regional European “liquid hubs”.

Alternative proposals to the EU gas market model currently under development (for joint discussion & consideration)

Long-term supplies (firm contracts, main/basic demand load):

- More flexible LTGEC (off-taking of contractual volumes & pricing formulae & price review rules);
- Long-term access to transportation capacity for full duration & volume of LTGEC (open seasons); and
- Modified pricing formulas linking gas to its replacement fuels (indexation not only to petroleum products).

Short-term supplies (interruptible contracts, additional/semi-peak & peak demand load):

- Spot contracts;
- exchange pricing (futures, gas indexes, forward curves).

Given the centrality of these issues for energy trade and investment and the economies as a whole, they should be further discussed within the community of EU drafters/legislators, preferably jointly with non-EU suppliers and transmitters, in order to clarify and improve the provisions of the existing documents of the Third EU Energy package (which have already entered into force) by related documents to be further developed with the (hopefully mutual) aim of minimising the risks and costs for all the interdependent parties of cross-border energy value chains within expanding “energy Europe”.

⁴³ This explains, from my view, the Russia-Ukraine 2009 LTGEC structure rationale: it is more practical (understandable & sustainable) to start contractual relations history with a less sophisticated pricing formula which is similar to the basic 1962 Groningen formula.

⁴⁴ As defined in Regulation 715/2009 art.2.1.15.