

The European Gas Pricing Model

A Choice to be Made

A View from Gazprom Export

Sergei Komlev

Head of Contract Structuring and Price Formation
Gazprom Export

Bratislava, November 21, 2011



European GTM Needs to Incorporate Gas Pricing Model

- The drawback of the proffered existing Gas Target Models is that they do not specify the future Gas Pricing Model. A pricing mechanism is a vital part of any market. Developing architecture of the gas market without an idea of a pricing mechanism is commensurate to building a house from the roof down.
- Continental Europe has developed a unique hybrid pricing system based on coexistence of oil-indexed contracts and gas-indexed hub prices. Under the existing model, oil-indexed prices play a leading and dominant role, while hub prices play a balancing and subordinate role. It is a pure market and a highly competitive system.
- A fight launched against capacity hoarding may be damaging to LT supply contracts. Even though unintentionally it could bring the existing hybrid pricing system to a collapse.
- "It is not without peril and, most likely, not efficient to apply simple neoclassical economic theory to the European gas market with its inherent complexities...Trade will only flourish when transactions are coordinated by contractual structures in such a way that it is acceptable to all parties involved, up-, mid-, and downstream, taking into consideration their own perception of the associated market opportunities and risk" (CIEP Vision on the Gas Target Model).

2

Dear conference participants,

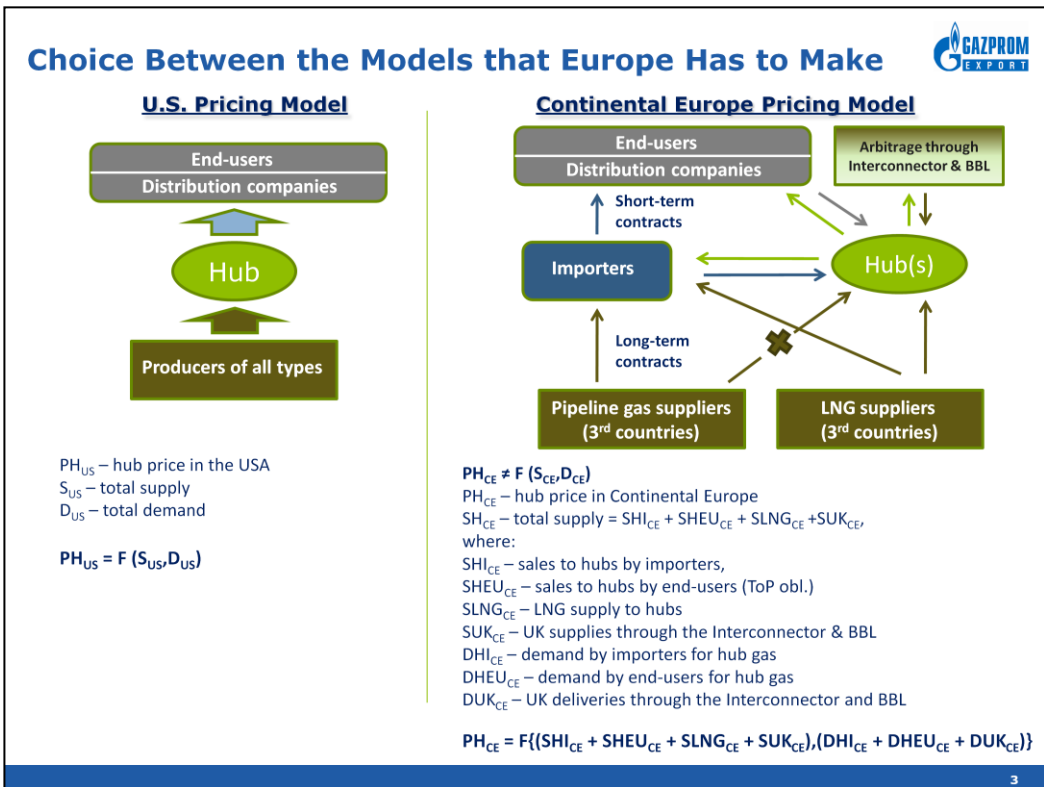
Welcome! My name is Sergei Komlev and I am in charge of contract structuring and pricing for Gazprom Export. Accordingly, it is understandable that my focus today will be on the future gas pricing model for Europe. And from that angle I will touch upon issues of gas infrastructure development.

As you certainly are aware, the Third Energy Package reveals nothing about the future pricing model for an integrated European market. This is not remarkable as the aim of the Third Energy Package is to try to make energy transmission network independent of the supplier interests through conflict with transport capacity hoarding.

But when it comes to developing gas market target models (GTM), lacking a clear vision of the associated future pricing system is a drawback. We saw a number of such targets models developed recently but all of them are "fuzzy" on the subject of the future pricing mechanisms. GTM builders prefer to allude to the buyers and sellers who will make a final decision on choice of the pricing system. It is implicit that model builders favor hub-based pricing because their models focus on hub creation and integration. However, that approach is simply not adequate. Indeed, a pricing mechanism is an integral and vital part of any market. It is clearly rational to develop the GTM upon the "foundation" gas pricing model. Moreover it is a failure strategy to put aside pricing mechanisms and develop market architecture without it.

We have an impression in Gazprom that there is a tendency for Europeans to experience a self-imposed inferiority complex when comparing their existing pricing model with that of the liberalized American or British variants. The meaning of the word "liberalized" is, in itself, key to understanding this complex. This word implies that the existing pricing system on the Continent, dominated by the LT oil-indexed prices, is archaic and not transparent. The new "liberalized" subsystem within it is immature. Today, I will try to illustrate that Continental Europe has developed a unique hybrid pricing system based on the symbiotic coexistence of oil-indexed contracts and gas-indexed hub prices. Under the existing model, oil-indexed prices play a leading and dominant role, while hub prices play a balancing and subordinate role. It is a purely market-driven and highly competitive system.

Our second impression is that the reformists do not understand very well what they do restructure. Simple application of neoclassical economic theory to the European gas market ignoring its inherent complexities may, even though unintentionally, bring this existing hybrid pricing system to a collapse. These changes could lead to a termination of the long-term gas supply contracts as these contracts will not be able to protect the investment programs of the exporters. Let me remind you that long-term contracts are a cornerstone of the energy security of the import-dependent Europe and oil-indexation is a hedge against price manipulation by the dominant suppliers. In that sense, the call for absolute use of gas indexation is a recipe for disaster for the European gas industry.



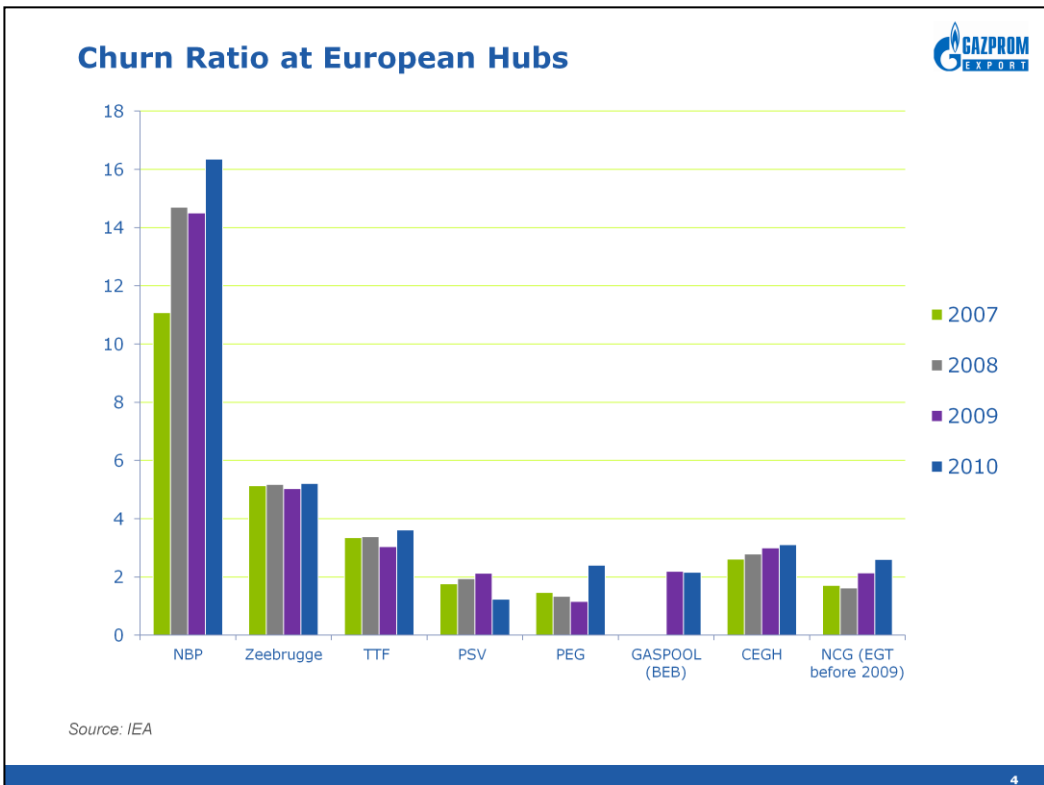
What kind of choice will Europe inevitably have to face? It is the choice between Continental and American gas pricing models.

What I will demonstrate in that part of my presentation is that the Continental market has its own unique organization and is mature enough to perform the functions that it is designed for. There is no cause for shame.

In contrast to North America, natural gas pricing at Continental European hubs does not provide a true indication of the supply-demand balance because the Continental European market comprises a complicated structure of long-term and short-term contracts. Therefore, Continental hub pricing is not a function of total supply and demand but a function of something quite different; arbitrage of all kinds, between different contract pricing structures, between contract and spot prices, between hubs, between UK and the Continent. In fact, the market in Continental Europe is an ideal stage for arbitrage. Continental Europe utilizes a multiplicity of supply prices and this contrasts starkly with the USA where there exists the one Henry Hub price and all other pricing is derived from it. Portfolio optimization on the Continent falls upon the gas procurement managers who evaluate and select from among the existing supply options. Should the Continent drift to the American model, the nominal “one price” will take the form of the most expensive marginal shipper. Consequently, all buyers will have to pay this price.

I ask you to pay special attention to Slide 3. The Oxford Institute for Energy Studies will likely not show you anything of this kind as it probably perceives no difference between the models, and its experts apply the same neoclassical postulates to both the USA and European gas markets.

Another important conclusion you may draw from this chart is that our clients are not interested in preserving the value of the commodity they are selling. Low spot prices increase revenues from arbitrage and are only limited by take-or-pay obligations.

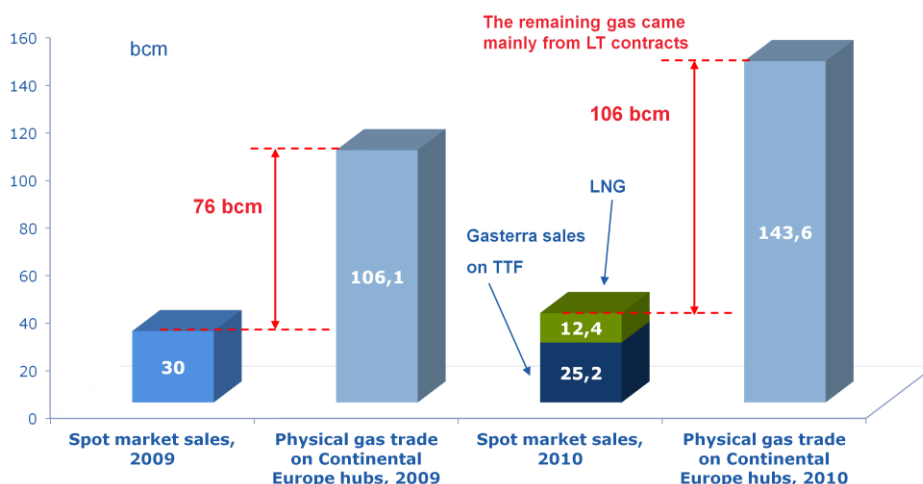


The specific character of natural gas price signals in Europe is demonstrated by the extremely low churn ratios at Continental hubs. Let me remind you that churn ratio is a ratio of total trades including paper trading conducted at a hub to trades that imply physical delivery. In order to produce sustainable price signals, the churn ratio has to be at least 15. In Europe, only the NBP meets this condition. Continental markets do not pass this test. Some analysts say that low churn ratios on the Continent are a reflection of the transition phase, and that, as hub markets mature, churn ratios will grow. I am pessimistic with respect to the further virtualization of the hub trades. It is not because there is a lack of appetite on behalf of European financial institutions to play with the forward curve. Simply put, it is extremely hard to predict what the price on a balancing market will be in two or three years because these prices are not about supply and demand but rather about arbitrage opportunities. There are too many moving parts in the balancing market that must be taken into consideration. To establish a rational forecast for a period of time extending more than 9 months appears to be a "Mission Impossible".

On the Continent the available financial instruments usually offer hedging opportunities that are limited in duration to only six to nine months. It is no simple coincidence that the maturity of forward instruments equates to a base period in the LT supply contract formulas. Prices of LT contracts for oil products indexed formulas are usually more or less predictable.

Churn ratios for Continental hubs are low and do not look likely to increase, as shown in the chart on Slide 4. The major conclusion from this chart is that we will not have just one global price for gas in the foreseeable future. Prices in the USA are a function of supply and demand. Contract prices in Japan have nothing to do with gas supply and demand. Hub prices on the Continent are a function of arbitrage and this environment is a paradise for the arbitrageurs already. In this sense, it is a mature market by now. In a similar way, it would be wrong to say that a pony is not a fully formed horse but that it is simply another animal.

Primary Sales Account for a Small Portion of Physical Trading at Continental European Hubs



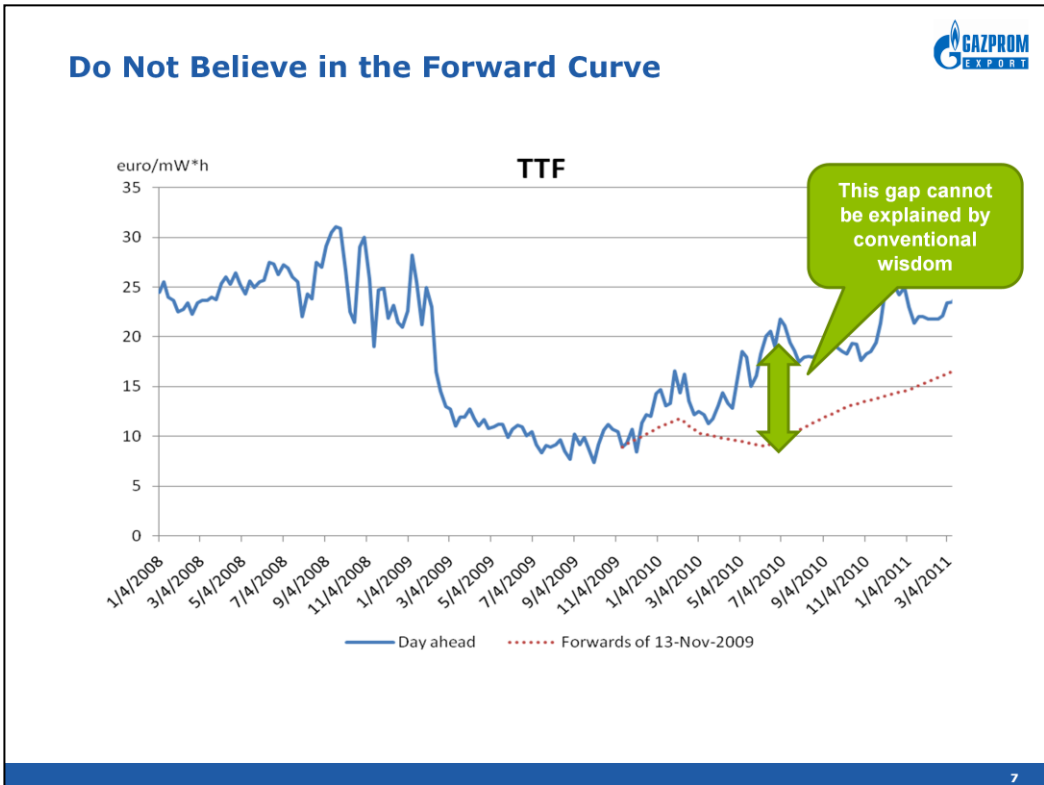
Sources: CERA, "The International Group of Liquefied Natural Gas Importers" and Gazprom export estimates based on companies' reports

In contrast to the U.S. Henry Hub, where primary sales account for the bulk of physical trades, European hubs generally play the role of market balancer, and during the most recent crisis served as markets of "mistakes in demand assessment" rather than as full-fledged price originators. According to our estimates, less than a quarter of all physical trades in Continental Europe were comprised of direct sales of gas. The remaining amount was comprised of secondary or tertiary volumes sold back and forth. Large part of these physical trades are intraday operations conducted for a small speculative margins. A major contributor to direct sales on Continental hubs is GasTerra. This Dutch company sells half of its domestic output on TTF as it was envisaged by government decree.

USA & Continental Europe Pricing Models Fundamental Differences

1	USA	Hub price is a function of total demand and supply
	Continental Europe	Hub prices are function of arbitrage of different kinds
2	USA	One price which level is determined by Henry Hub
	Continental Europe	Multiplicity of prices. Company supply managers determine the price of gas portfolio
3	USA	Majority of gas is sold on hubs. Majority of LT contracts has diversion clause
	Continental Europe	Less than ¼ of physical trade on hubs represent primary sales. The remaining volumes of gas traded come from LT contracts for pipeline gas
4	USA	High churn ratios
	Continental Europe	Churn ratio below 4 (low, but sufficient for balancing market)

A summary of the fundamental differences between the two pricing models is presented on Slide 6. One have to make a clear distinction between the models. Drive towards the American pricing model in electricity trading in Europe have already resulted in higher prices. A recent study published in the European Energy Review shows that in France, since the coupling of markets with its neighbors, nuclear power has become the marginal producer (and thus sets the price of electricity) only 12 percent of the time against 60 percent of the time when France was isolated. This means that in the new situation electricity in France will be billed at a higher rate at least half the time compared to the old situation. In respect to gas market it means that a country with a source of cheap gas supply could loose this benefit once prices will be determined by the total supply and demand.

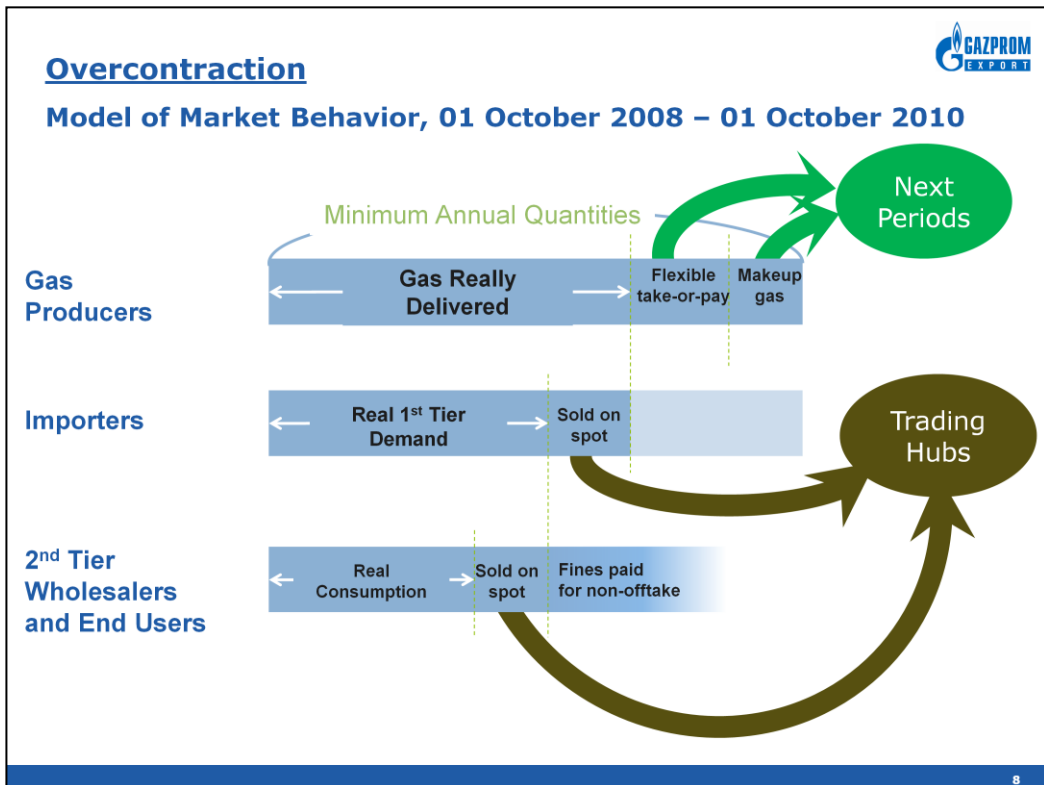


Gazprom's clients tell us that they do not care about the specific nature of the European market but believe in gas indexes because these indexes offer lower prices. It is simply wrong-headed thinking and, in practice, a costly exercise to ignore realities. Hub markets are balancing markets and prices on them are set not by the total continental supply and demand.

Please allow me point out that the growth in hub prices in the third quarter of 2010 came as a great surprise to nearly all market participants and their well-paid consultants. These consultants already announced that their longtime predictions finally materialized and European gas entered a new era in pricing. Growth in hub prices occurred at a time when the recession was not yet over and Europe was not short on gas; indeed, demand in the third quarter of 2010 was lower than in the third quarter of 2009. Expectations of a new wave of LNG, as reflected in the low futures prices seen at the end of 2009, were negatively affecting sentiment in the market, but not the real price curve.

What had, in truth, occurred is that additional volumes of Qatari gas reached the European market in the third quarter of 2010. Contrary to economic theory and conventional wisdom, these volumes have not led to a further decline in the spot price but rather to a major increase in hub prices. Put in other words, the paradox is that as more Qatari LNG comes to Europe, the more the hub-based price increases.

It is clear that supply and demand drive Continental hub prices only to a limited extent and that arbitrage opportunities produce unexpected effects on prices. A new development in arbitrage on Continental hubs over the crisis period is the involvement of large volumes of gas under take-or-pay obligations of the short-term contracts.



Allow me to take you on a brief detour into history. The gas year, as you all know, begins on October 1st. In mid 2008, when new contracts were negotiated, market participants were expecting tight supplies and were demanding as much gas as possible. They were also accepting high prices. The economic crisis came as a major surprise and end-users soon realized that they did not need the amount of gas they had ordered from importers as depicted on the next slide. As a result, first-tier wholesalers or importers (in their turn) were not able to meet their minimum quantity requirements.

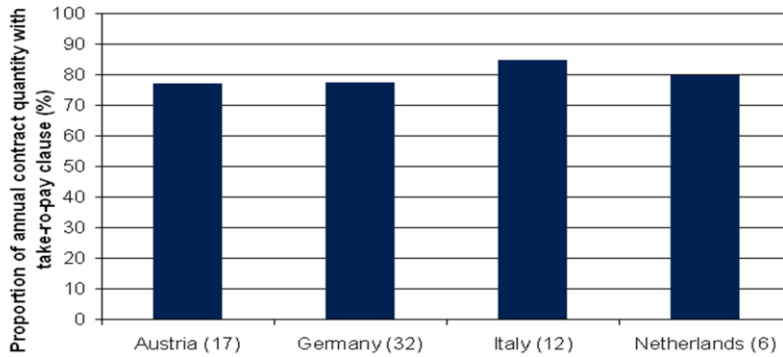
There is a fundamental difference in the execution of take-or-pay obligations in the long-term contracts that Gazprom offers its clients and the short-term, one- or two-year contracts that the clients of our clients have. Long-term contracts offer a “make-up” gas option (not to mention flexible take-or-pay terms in some cases). The “make up” gas option allows customers to take quantities not needed in the current year in later years provided that prepayment is made.

End-users and distribution companies in the EU have no right to make-up gas because of the short-term nature of their contracts. You might have noted that BKartA (Germany) introduced limitations on contract duration beginning October 1, 2007. End-users and distribution companies have only two options – to pay fines for gas that is not taken, or to dump the gas on trading hubs, thus reducing their losses by whatever revenues they may earn from those sales.

Gas volumes under take-or-pay obligations dumped on the hubs, in our view, put enormous pressure on spot prices and this has been the main reason behind the divergence in spot and contract prices. This divergence was misinterpreted by many analysts as signal of a complete divergence of oil-indexed and gas-indexed prices. EU regulations led to shortened durations of downstream contracts in order to enhance competition. Collectively, these had the unintended consequence of depriving end-users and distribution companies of the make-up gas. If the make-up gas opportunity was available, there would be no need to dump “take-or-pay” gas on the hubs. No major diversion of the hub and contract prices would take place as a result.

Results of Datamonitor Survey

Q: What percentage of your annual contract quantity does the take-or-pay clause cover?

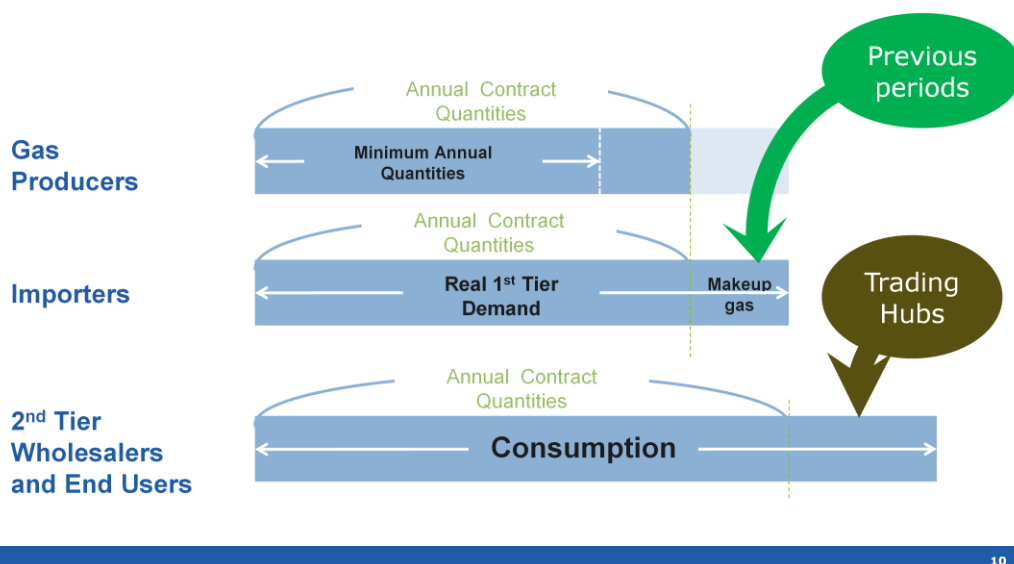


The Average Take-or-Pay Coverage is 70% - 80% of the Annual Contract Quantity

Let me remind you, take-or-pay obligations exist not only between exporters and first-tier wholesalers but also between wholesalers and end-users. These obligations comprise up to 80 percent of annual contract quantities.

Undercontraction

Model of Market Behavior, 01 October 2010 – 01 October 2012



To return to the question of what made prices strong in the third quarter of 2010 prior to the cold winter, the Fukushima accident, and the turbulent political environment in North Africa. To argue that markets anticipated these events does not look persuasive. It was reset of the arrangements under short-term contracts that caused escalation of hub prices in Europe.

New short-term contracts came into force starting October 1, 2010. End-users and wholesalers tried their best to minimize their contract obligations. The conventional wisdom of the market was, "Why should we buy expensive gas from Russia when we can get it cheaper on the spot market whenever we need it?".

But it is also true that the dumping, or forced sale, of gas at hubs has stopped. This "undercontracting" led to additional demand for spot gas and resulted in a kind of "greenhouse effect" on prices. Gazprom's clients responded to the new market situation by increasing their offtake above the Maximum Annual Quantity. Some of them executed the make-up option.

So, what are the takeaways from the analysis I've just presented? Two and a half years of abominably low spot prices in Europe have created the illusion that gas has lost its link to oil once and forever. This is not true and could not happen simply because oil-indexed contract prices serve as the underlying benchmark for arbitrage on the Continental market. Temporary decoupling of prices occurred as unintended result of market restructuring at a time of unexpected demand contraction.

Dual Pricing Model Supports Competition



Major Gas Exporters

(bcm)

	I-III Q. 2010	I-III Q. 2011	Δ (bcm)	Δ (%)
Gazprom	99.1	111.5	+12.3	+12.5%
Algeria (incl. LNG)	42.1	40.4	-1.8	-4.2%
Libya (incl. LNG)	7.6	1.5	-6.1	-80.6%
Qatar	23.0	31.2	+8.2	+35.7%
Nigeria	9.7	13.2	+3.6	+37.1%

Major Gas Producers

(bcm)

	I-III Q. 2010	I-III Q. 2011	Δ (bcm)	Δ (%)
Norway (incl. LNG)	82.3	79.1	-3.2	-3.9%
Netherlands	51.0	51.7	+0.7	+1.3%
UK	49.0	37.2	-11.8	-24.1%

Sources: International Energy Agency database, Eurostat, national statistical agencies, Wood MacKenzie, Lloyds as of October 2011

11

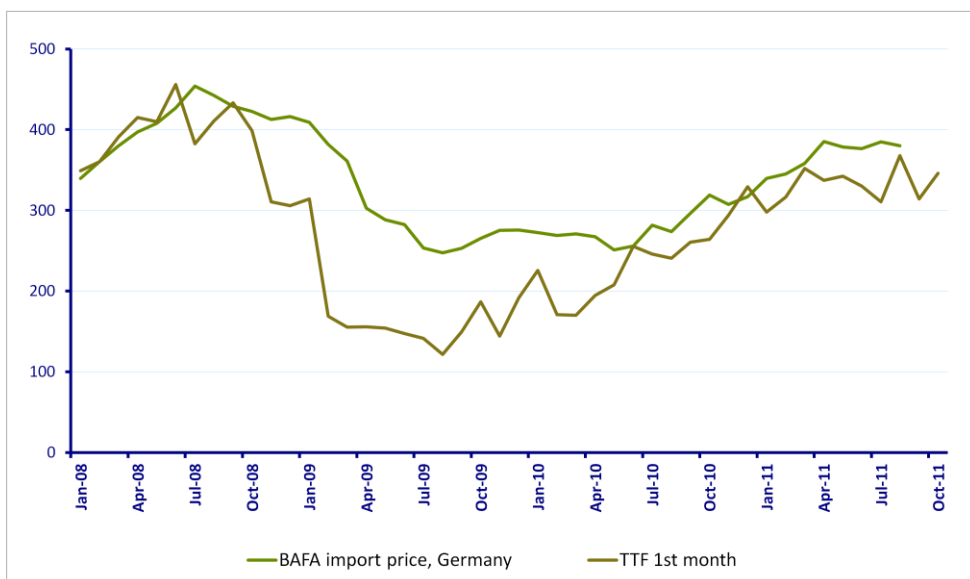
11

Oil-indexed contract prices serve as the benchmark price on the Continental market. But that does not mean that the hybrid pricing system creates impediments to upstream competition and therefore has to be replaced with something else? In fact Continental market is highly competitive (as shown on the Slide 11).

This market is amply supplied with gas originating from long-term contracts. The existing contracts that Gazprom has with its European clients alone allow for a supply boost of 40 bcm, from the current 150 bcm per annum to 190 bcm. Competition in the Continental market among the major exporters is already tough and gas importers have additional supply options available to them. If they prefer to take only 150 bcm of Russian gas, that means that there are other sources of cheaper gas that could be acquired through other long-term contracts or from the hubs. In the first 3 quarters of this year gas from Qatar and Nigeria turned out to be more competitive than other gases and increased its market share.

In the USA these prices are low now and serve as indication of the oversupply caused by shale production boom. As previously mentioned, spot prices on the Continent are a function of balancing rather than total supply and demand relationship. Therefore, strictly speaking, Continental hub prices do not serve to indicate whether there is a glut or deficit of gas irrespective of how high they are in the absolute terms. The only representative indication of gas glut on the Continent is the emergence of volumes of "make-up" gas. We do not expect any significant volumes of such gas this year. This is a good sign, effectively demonstrating that the gas glut is over.

Asymptotic Contract and Spot Price Behavior



12

Once the importers have exercised arbitrage options, spot prices tend to settle at a discount to the contract prices (adjusted for the transportation costs) and the value of flexibility provided by the pipeline suppliers. Second reason why spot prices usually lag behind contract prices is one-side balancing on hubs. In case of short-term undersupply, it would be more convenient to use the existing long-term contracts arrangements for getting additional deliveries. In case of oversupply selling gas at hubs is a quick-fix. A good example of one-side fix is Finnish market, a gas “island” with prices lower on a small hub than that coming from one single supplier under LT contracts.

In the few cases when spot gas is more expensive than contract gas on the Continental market, it is a result of the inadequate development of gas infrastructure at a time of strong demand for gas. The more developed this infrastructure is and the more integrated the EU domestic market is, the rarer will be instances when spot prices rise higher than as contracted.

The relationship between hub and contracts prices may best be described by the mathematical term, “asymptotic”. The asymptote in our case is the distance between the contract and hub prices that approaches zero when market moves to equilibrium and is getting more and more integrated. Hub prices may cross the contract price line but that constitutes the exception rather than the rule.

Gas producers cannot accept a proposal to make contract and spot prices comparable by lowering contract prices. In most cases, spot prices will respond immediately by dropping down further. That is, any further decreases of contract oil-indexed prices would result in a new cycle of spot price downward adjustment. Contract price reduction may make sense only in the case it increases long-term contracts offtake. This is likely to occur only when there are other suppliers that are hesitant to deliver gas at a reduced price

The Rationale for Oil Indexation Still Holds

Two and a half years of abominably low spot prices in Europe have created the illusion that gas has lost its link to oil once and forever...

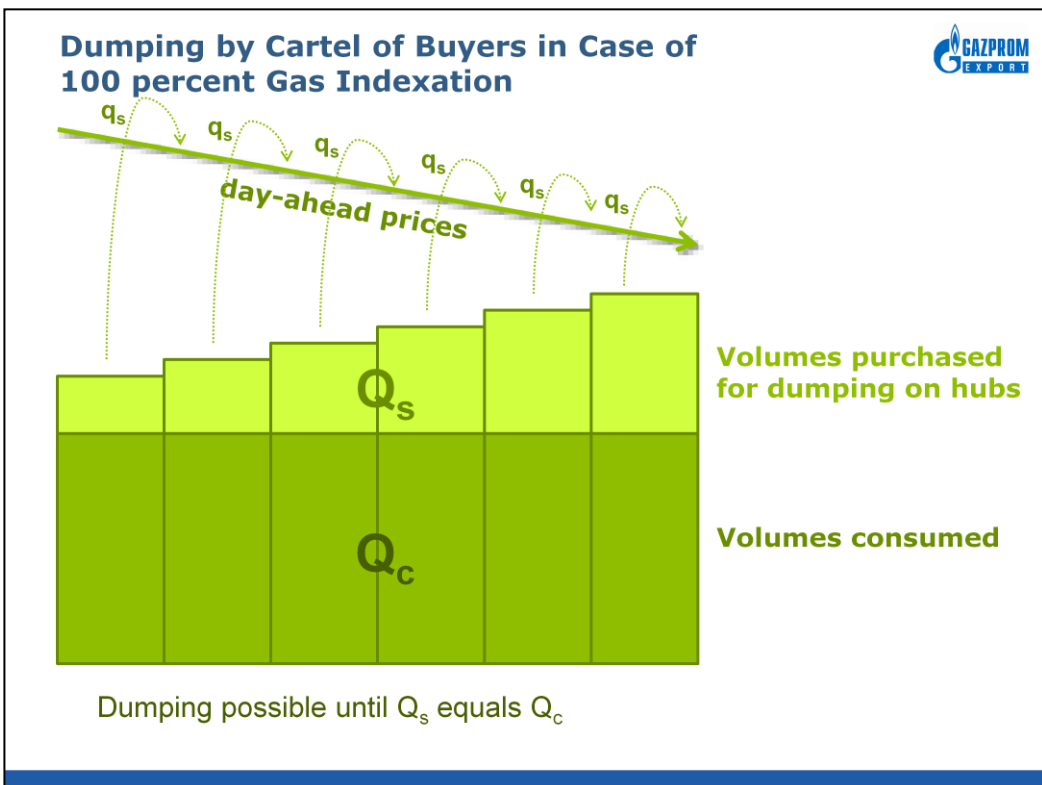
- This is not true. The days of oil indexation are not over.
 - Oil and gas compete in residential sector. One third of houses in Germany still use oil products for heating.
 - Even though there is no much demand-side substitution between oil and gas in power generation, there is still more than a virtual relationship between the two fuels.
 - Merit order puts oil products and gas in the same category of fuels used in peak or semi-peak.
 - Oil products are a reserve fuel for many power plants and industry if the gas supply fails.
 - The oil-gas link will only strengthen in the future due to direct competition in the transportation sector from gas-fueled vehicles and the use of LNG as bunker fuel.
- There is a new rationale for oil-indexation: retaining the oil-gas link makes gas inflation-indexed.

13

Critics of oil indexation often claim that it is outdated because there is not much demand side substitution between oil and gas nowadays. However, demand side substitution has not been the case in Europe for more than 20 years. Residential users that switched once to gas from fuel oil were not keeping a fuel tank in their backyard in order to use it should gas prices become the higher cost fuel choice. Limited day-to-day substitution or even its absence does not rule out a deep rooted relationship between oil and gas.

There are several reasons the days of oil indexation have not passed, apart from its unique role in supporting long-term investments:

1. Gas competes with oil in the residential sector. One third of houses in Germany still use oil products for heating.
2. Gas nearly replaced oil in European power generation 20 year ago. Therefore, the argument presented by the Oxford Institute for Energy Studies suggesting this means there is no longer a rationale for oil indexation is invalid.
3. Even though there is not much demand-side substitution between oil and gas in power generation in Europe, there is still more than a virtual relationship between the two fuels;
 - Merit order puts oil products and gas in the same category of fuels used in peak or semi-peak. In that sense, there is a stronger competition with oil products than with coal which is used in base load only.
 - Oil products are a reserve fuel for many power plants and industries if gas supply fails.
4. The oil-gas linkage will only strengthen in the future as a result of direct competition in the transportation sector due to the increasing popularity of natural gas-powered vehicles and the use of LNG as a marine bunker fuel. Gazprom anticipates that European consumption of gas in transportation applications may grow from the current 3 billion cubic meters per annum to as much as 100 billion cubic meters in 2030.
5. There is a new rationale for oil indexation – that relying on the linkage with oil makes gas inflation-indexed. Factoring oil products into the formula perform the function of a universal deflator better than any other man-made price index, be it CPI or PPI.



Elimination of oil-indexation and thus a two-tier pricing system is not an appropriate means of simplifying interactions between market participants on the Continent. The move to 100 percent gas indexation in long-term contracts is unacceptable to gas producers. The fact that low churn ratios at Continental hubs raise doubts as to the quality of their price signals is only one factor.

Chart on slide 14 illustrates a mechanism for predatory pricing in case of 100 percent gas indexation. As I have already mentioned today transitioning to gas-indexed contracts will not change the balancing nature of the European gas market. It doesn't matter how much lipstick you put on a pig, it still remains a pig. As prices here are not determined by the total continental supply and demand relatively small additional volumes bought for the dumping purposes could bring day-ahead prices down. Losses from dumping by a cartel of buyers will be fully compensated next day with a profit when a lower day-ahead price from a previous day devalues the entire supply portfolio. This predatory pricing is possible until volumes needed to lower hub prices reach the size of the volumes consumed.

Producers from the third countries will be running an intolerable risk of gas price erosion because there is virtually no force in Europe interested in preserving the value of natural gas. Producers in the EU (Dutch and British) are definitely not interested in selling gas below cost though it is lower than for suppliers from the third countries due to their high transportation and liquefaction costs. Indigenous producers have easy access to the hubs and can buy gas to meet their contract obligations when hub prices drop too much. Production could be resumed in a swing mode when prices are higher than their costs.

Pipeline producers from the third countries who do not have easy access to the market hubs find themselves disadvantaged. Practically speaking, it is not possible for Gazprom to agree with its clients that it will meet its contract requirements with gas bought at the hubs when it is cheaper than contract gas. If the oil-linked benchmark price ceases to exist, exporters selling gas under LT contracts will be forced to accept prices irrespective of how low they are without any leverage to influence these prices.

To conclude. Unjustified demands of gas importers that producers should be fully responsible for price risks in long-term contracts alter the fragile balance of interests between buyer and seller. Pushing these demands will lead to nothing else but the demolition of long term supply contracts. Indeed, if markets are liquid enough, there is no need for long term supply contracts.

Gazprom Supports Hybrid Pricing Model on the Continent

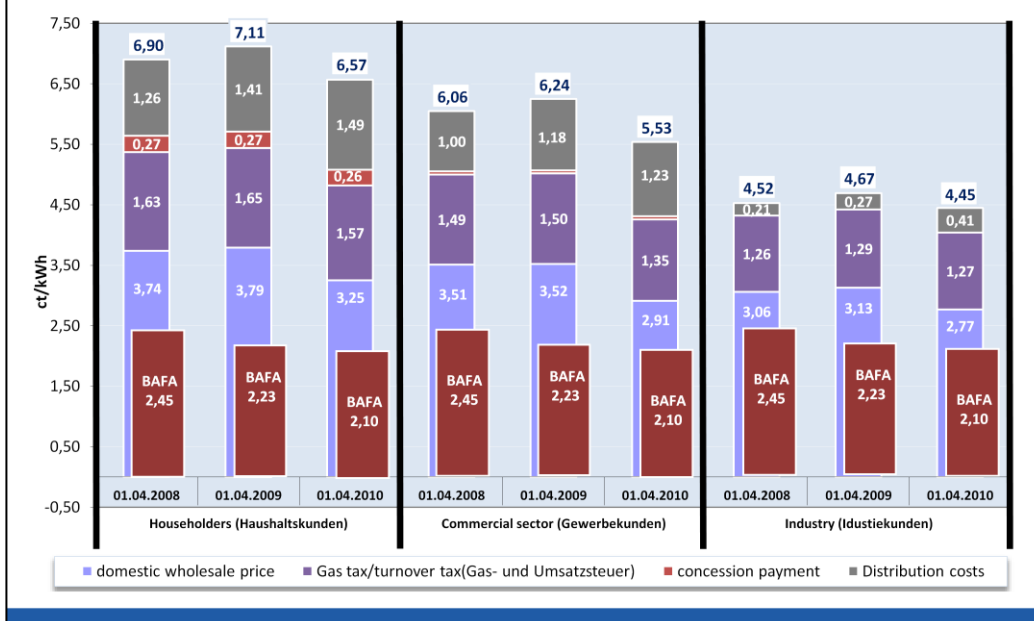
- The existing market structure on the Continent is satisfactory and offers win-win options for both buyers and sellers.
 - However, the balancing nature of the Continental market has to be recognized.
 - This market has to be treated in a way that allows long-term oil-indexed contracts and spot gas to co-exist and complement each other.
 - Lessons from the crisis have already been taken.
 - Our clients do not believe in the miracle of cheap spot gas anymore.
- A move to overall gas indexation in long-term contracts is unacceptable to gas producers, and not only because the low churn ratios at Continental European hubs raise doubts as to the quality of their price signals.
 - Turning to gas indexation would not change the balancing nature of the spot gas market in Europe.
 - But gas indexation would change the balance of interest in favor of importers; it would create the opportunity for predatory pricing at the hubs and devalue the entire supply portfolio of producers.
- A move to the American model – that of hub pricing without the cornerstone of long-term contracts and direct sales by gas producers at the hubs – is not a suitable option.
 - Europe is increasingly import-dependent and there are oligopolistic structures on both sides of the market.
 - There is no need to open a Pandora’s Box of endless conflicts.
 - Acrimonious, rather than cooperative, relations between buyers and sellers are not in the best interest of Europeans as they undermine the long-term security of supply.

The existing market structure on the Continent is, at a minimum, satisfactory in that it offers win-win options for both buyers and sellers. However, the balancing nature of the Continental market has to be taken into consideration by major players, including reformers. This market is a different “beast” than the U.S. market. It has to be treated in a way that allows long-term oil-indexed contracts and spot gas to complement each other. Lessons from the crisis have already been realized. Our clients do not believe in the miracle of cheap spot gas anymore. Discount price suppliers (with no gas of their own) that emerged at a time of financial crisis are not able to keep their promise to deliver cheap gas to their customers. Some of these suppliers have gone bankrupt already (such as TelDaFax).

Transitioning to the American model; that of hub pricing without long-term contracts and direct sales by natural gas producers, is not a suitable option either. As a matter of fact, Europe is increasingly import-dependent and there are oligopolistic structures on both sides of the market that will end up opening a Pandora’s Box of endless conflicts. We can expect that inspections by the EU antitrust authorities similar to those conducted in Gazprom affiliates in October 2011 will be conducted on an on-going basis. Acrimonious, rather than cooperative, relations are not in the interests of Europeans, as they will undermine the security of supply.

Redistribution of Margins by Sector, Germany (1)

Source: Monitoring Report 2009, 2010, 2011



As I have previously noted, the existing market structure on the Continent is satisfactory and offers win-win options for both buyers and sellers. The basic problem is how to preserve long-term contracts and enhance competition on the internal EU market.

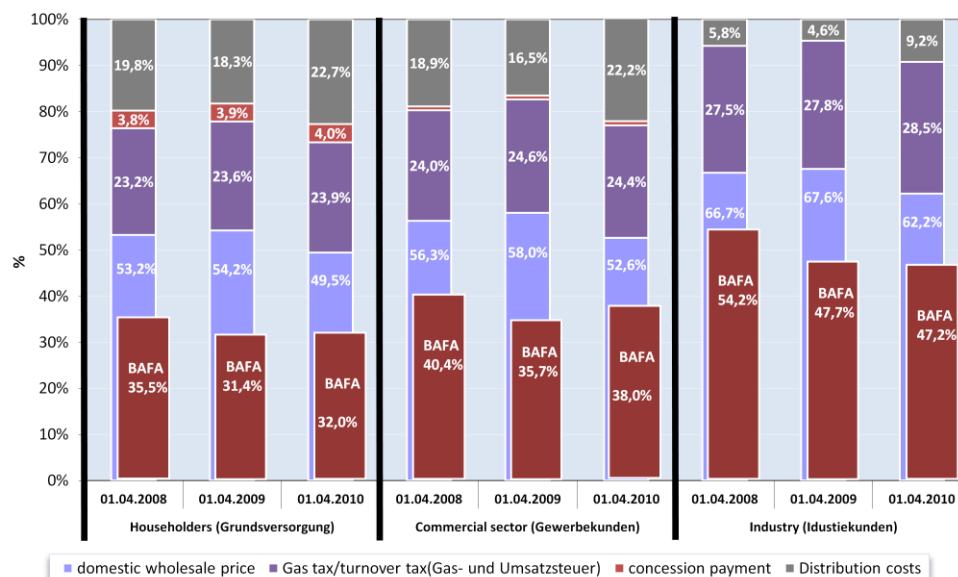
One of the major arguments in favor of hub pricing is that lower prices originating on the hubs are transferred throughout the value chain to the benefit of end users of all kinds – household, commercial and industrial. Is it really the case? A snapshot of the German gas market at the beginning of April taken over the last three years that has been provided by national regulator Bundesnetzagentur indicates that this was certainly not the case in 2009 when hub prices reached their bottom. End-user prices were slightly higher in April 1, 2009 compared to April 1, 2008. Beneficiaries of lower export prices as measured by the April 2009 BAFA index were not the end users but, taken as a group, domestic wholesalers and distribution companies (stadtwerke).

On April 1, 2010, industrial, commercial and household users paid less for natural gas compared to April 1, 2008 by 2, 9, and 5 percent, respectively. Exporters were the main losers with an average export price decrease of 14 percent in April 2010, compared to April 2008. The BAFA index price as a share of end user prices suffered a major decrease from 54 percent in 2008 to 47 percent in 2010 (7 percentage points) in the average end-user price for industrial customers. Domestic wholesalers as a group showed mixed results. In absolute terms, their average sales price decreased by 1 percent for household users and by 8 percent for commercial users. However, domestic wholesalers' margins rose by 20 percent in average sales price to industrial users. Margins of domestic wholesalers in Germany in 2010 on average varied from 0.7 eurocents per kWh for commercial users to 1.15 cents per kWh for households, according to our estimates (based on German's regulator's data).

In 2010 as in 2009, major beneficiaries of competition between exporters and domestic wholesalers were distribution companies whose share of the margins increased in absolute and relative terms. Distribution companies' average prices gained 18 percent in sales to households, 23 percent in sales to commercial users, and 95 percent in sales to industrial users. Snapshots of the German gas market do not support the statement that low hubs prices are transferred throughout the value chain to the benefit of end users. In conclusion; the unintended consequence of competition between exporters and importers is the growing margins of distribution companies.

Redistribution of Margins by Sector, Germany (2)

Source: Monitoring Report 2009, 2010, 2011



17

So far, the competition enhancement policy has only divided European gas market participants. They all became involved in a vigorous fight to preserve their historic margins. That is a positive development, and many will state that this is how competition works. But competition does not work if it deprives producers and importers of reasonable margins and brings gas prices below a level that supports the investment cycle in the gas industry. An obvious lack of even modest resultant benefits to end-users only compounds the negative aspects of this issue. Reformists should be careful when giving competitive advantages to one group of market participants at the expense of another. They should clearly understand that they are reforming a unique market that is in fact a balancing market and an "overdose" of competition as describes above can bring the unique hybrid pricing on the Continent to an end.

In the legacy system, the benefits of arbitrage manifesting themselves in lower spot prices were available to a small group of importers. Now these benefits are available to a broad group of market players that have no import contracts, bring no gas to Europe under long-term arrangements, and are not responsible for its storage and deliveries structuring. Advantages without responsibilities for this group of players results in unfair competition. If the market reformists are not pursuing an implicit aim of pushing importers out of the business what they have to do is to protect these holders of LT upstream contracts from unfair rules of the game. One solution could be an introduction of a minimum wholesale price for supply tenders initiated by the distribution companies. This price must be no lower than the recent BAFA price plus reasonable costs of storage and transportation to the distribution companies. Participants of supply tenders should also meet strict qualification standards including a requirement to have import contracts. Another option importers with long-term contracts, all other terms being equal, need to have an advantage over suppliers without imported gas at these tenders. Currently the antitrust regulations in Germany put major importers in a disadvantageous position to other bidders because they are not allowed to bid at the tenders at a price that is lower than the price of their average country portfolio.

Anecdotal experience gives us no evidence that hub pricing is better than traditional Dutch-formula oil-indexed pricing. "Transparent, easy to understand, competitive and fair", as liberal determinists say. I strongly doubt that what we get as a result of hub pricing is easy to understand and fair. Some argue that markets are not always rational and do not carry an obligation to cover production costs, but when markets are not rational over unreasonably long periods, corrective action may be appropriate. It is time to re-examine some liberal orthodoxies of the 90th.

THANK YOU FOR YOUR ATTENTION!