

Call for Evidence n° C10-GWG-70-03

CEER Vision Paper for a conceptual model for the European gas market

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Key points

Bergen Energi believes in some fundamental goals in order to create an efficient internal gas market.

- A single market area for Europe should not be the aim in itself, but there is a need for a unique gas
 market model and rules, in order to facilitate trades from hub to hub. Market players, including
 consumers, need an easy doing pan-European model, even if not fully 'local' optimums.
- One market area should form one hub which again should be one balancing zone.
- There is a need for a single market reference for each hub, that reference being relevant for gas retailed to end-users (convergence between hub prices and oil-indexed value from long term contracts).
- Shipping activities (transmission / storage) involves a larger handicap for real market opening. The
 new gas market model should include a split between import, supply and shipping activities and
 support development of new players offering only shipping services (operations + balance
 management).
- Large end-users, especially with pan-European locations, need a direct access to each hub (virtual trading points), combined with cross-border (hub to hub) and swing (flexibility) instruments.
- Certain technical issues need to bet set in order to reach the pan-European goal: single EU-wide gas periods (seasons, day), gas quality issues (calorific value, odorisation).



1 Introduction

Bergen Energi is welcoming the invitation of stakeholders to facilitate the achievement of the internal gas market by 2015. Being active in the European energy market for almost 20 years, Bergen Energi considers itself as an independent market participant holding an extensive amount of experience and knowledge. This gives us both a unique position as a service provider in the market, at the same time as we have to consider how the market mechanisms are affecting the more specific needs of our clients.

Representing our clients, which are end-users in the wholesale market, we see the need for the gas market to develop towards a more competitive market, resulting in transparent and as-low-as-possible prices. Greater transparency is also highly welcomed, as an anticipated increase in demand for gas the coming years creates a bigger focus on security of supply.

Bergen Energi will in this paper present our views on a conceptual model for the European gas market, by highlighting the malfunctions of the market as it operates today. We will follow the ongoing work of the Commission and CEER towards reaching the goals of the 3rd Package, and hope that our participation in this consultation will be a resource in improving the European gas market.

The specified questions:

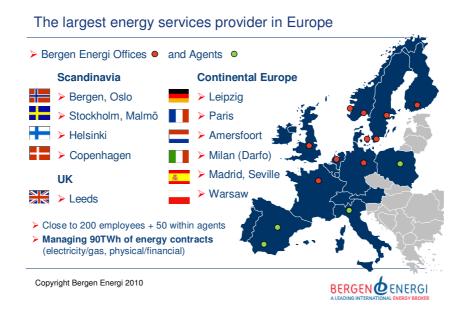
In general, Bergen Energi has experienced a huge development in the European gas market over the last 10 years, changing from being highly monopolistic, towards being more transparent and competitive. However, we find that the market still has a long way to go before becoming fully competitive and well-functioning.

The gas market is characterized by a more physical commodity, meaning that transportation, storage and balancing is of even greater importance than for the electricity market. The need for monitoring of competition, transparency, storage, and security of supply will only increase as demand for natural gas will only increase over the next few years.

2 Bergen Energi

Bergen Energi was established in 1991 as the first independent energy broker in the end-user market in Europe. Bergen Energi is active within all of Europe, and is established with offices in 9 countries in Europe. Bergen Energi has since its establishment been working actively towards a better functioning European energy market.

In 2010, Bergen Energi also established the leading global alliance of energy experts in Europe, North- and South-America.





3 Overall goals of the gas market model

The aim of the internal market is to deliver real choice for all customers in the European Union, so as to achieve efficiency gains, competitive prices, and higher standards of service, and to contribute to security of supply and sustainability, cf Recital 1 Directive 2009/73/EC.

Bergen Energi believes that this aim can be reached if:

- Real competition exists between down-stream gas players, both on wholesale and retail internal
 markets. In many cases, this implies a <u>split of the value chain and responsibilities</u> between
 importers/traders/shippers/suppliers (retailers). Too much market power is now concentrated in the
 hands of shippers (transmission and storage rights).
 Regulators and the new market model should support the emergence of different importation models
 with up-stream competition;
- The market is developing <u>transparent instruments and rules</u> that can be effectively <u>used directly by end-users</u> to secure both their physical supply (market access) and financial risks (hedging). This involves transparent and easy-doing mechanisms to allow <u>direct market access for end-users</u>.

We also agree that the overall goals of the model should include:

European Energy Regulators Goals	Some chosen issues of major importance	
Effective implementation of entry/exit systems	Entry/Exit subscriptions should be decoupled. Exit rights to delivery points should be owned by end-users, not shippers.	
Facilitating cross border market integration into an efficient competitive gas market at Community level	Quality issues: common odorisation rules, large calorific value tolerances	
Efficient capacity allocation procedures including market based mechanisms when demand exceeds the offer	Mixing allocation rules allowing long term bookings and short term market bookings	
Efficient usage of pipeline capacity, especially for cross- border flows of gas points in Europe, with the aim to integrate national gas markets, including limiting (physical between trading and contractual) congestions	"Use It Or Lose It" (UIOLI) capacity allocation rules should apply + Eventual reallocation of long term versus short term commercialized capacities	
Improving the integration of trading points leading to a convergence of market prices between neighbouring markets, reflecting market risks and supply/demand imbalances	Market coupling + common Internal index reflecting average gas price in Europe.	
Improving security of supply by fostering the appropriate network, storage and LNG (Liquefied Natural Gas) regasification capacity enhancement as well as upstream investments aimed at supplying the European gas market	Encourage up-stream competition between different value chains and importation models (locations, contract length, price regimes and indexations)	

Before answering the specific questions raised by CEER, we would like to focus on some additional issues Bergen Energi experiences when dealing with risk management and purchasing issues for large end-users across Europe.

Some key points in the down-stream gas value chain should be considered as essential to assure an effective competition. New players do need market instruments: 1/ to manage the expected seasonal modulation (swing between partial seasonality of gas imports and higher seasonality in gas demand); 2/ to adjust the supply to short term anticipations in gas demand (month-ahead, day-ahead); and 3/ to manage the balance positions within the day (intra-day market, eventually hourly prices).



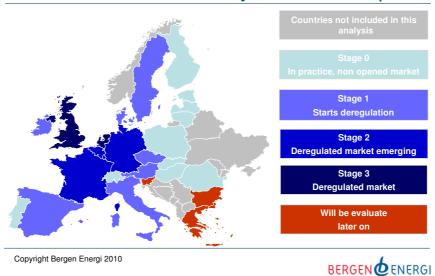
4 Current market situation

4.1 Retail market maturity in Europe

The market maturity and the ability for end-users to benefit from existing competition is still very differentiated in Europe:

- <u>North-West Europe</u>: gas market is to a great extent considered as efficient. Nevertheless, many challenges remain and should be dealt with.
- <u>South Europe</u>: some competition exist between gas players but end-users are facing difficulties benefiting from market opportunities and instruments.
- <u>Central-East Europe</u>: competition is not in place in practice, even though rules and laws are adjusted to prepare a free market functioning.

Gas retail markets maturity levels in Europe





4.2 Dual pricing reference

As stressed by CEER, the internal natural gas market still suffers from a lack of liquidity and transparency:

- <u>liquidity</u>: only a marginal part of the quantity of gas consumed within the Europe Union is traded on hubs (physical and virtual points) and even lower quantities on exchanges.
- transparency: most trades are standard bilateral OTC (Over-the-counter) exchanges between few
 physical gas players. Especially regarding trading of future contracts, we consider that transparency
 is too low and that creates significant uncertainties for end-users when it comes to hedge forward
 positions.

In some hubs, exchanges have not launched any future contracts. All trades are done OTC, which restrain transparency regarding forward prices.

This is for example the case for Zeebrugge hub, even if this is a strategic location for 'flexible gas':

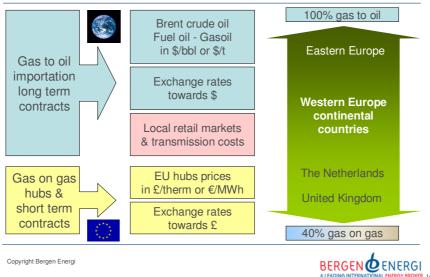
- convergence place between LNG spot imports and pipe imports through long term contracts,
- transit place between major marketing areas as UK, France, Germany, Netherlands.

4.2.1 Gas competition between oil-index border value and local hub prices

Moreover, in practice, Bergen Energi experience two different gas markets coexisting and interacting in Europe which can be presented as two different models:

- gas-to-oil competition: in this first model, representing the original price model, gas is marketed with
 its value still defined for each local country and customer/usage segment on a netback approach.
 This dominant model (probably over 85% of gas volumes sold to end-users) is the standard and
 historical model from the gas value chain as stated in long term importation contracts. In this model,
 the value of the gas is linked to oil products.
- gas-to-gas competition: in this second model, gas value is set by market forces based on supply
 and demand within each local market and hubs. When it comes to setting market prices, standard
 cost-plus drivers are taking more importance than the original netback approach. This model is still
 marginal, even if LNG imports development and the decrease in consumption in 2009 have given a
 significant impulse to local wholesale trades.

Wholesale price drivers

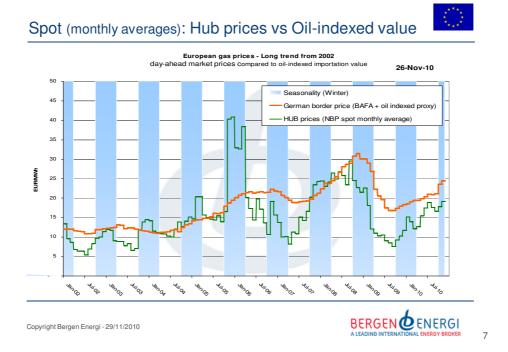


It is worth mentioning that the different price signals do not react to same drivers and that situations are different depending on the location (country).



The variance in price between the two models is commonly presented by showing the correlation and time to time decoupling between spot prices on hubs and import prices from long term contracts, for example at the German border.

The following graph shows spot prices in several hubs compared to an oil-indexed proxy for European border price:

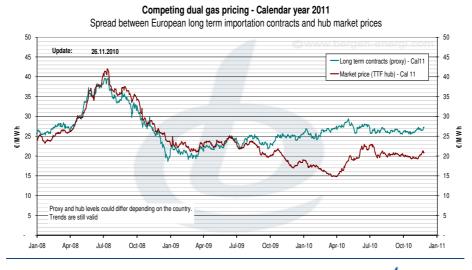


What is less usual is displaying that the decoupling also impacts forward pricing. This is even more important for most end-users which take positions in advance, as they have to secure both the physical supply and the price hedging.

The following graph shows forward prices in local hubs (base TTF) compared to an oil-indexed proxy for European border price:

Cal11: competition between hubs & imports levels





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4.2.2 Lack of transparency on oil-indexed gas forward prices

Even more confusing for end-users is that transparent hub prices are relevant only for deliveries of surplus gas which is not engaged in long-term contracts, and a very partial quote-part of gas volumes to be retailed to end-users. As a contrast, oil-indexed forward values applied in general are not transparent.

As a consequence of the surplus of gas, many suppliers have agreed to resell some secured volumes at hub forward levels, but this only applies for larger industrials and probably not more than 20% of all volumes consumed in Europe.

Most of standard consumers (SMEs, tertiary sector, households, etc.) still have to pay the oil-indexed forward levels, which at present time are being radically decoupled from forward hub prices (Future exchange contracts).

Notice: oil-indexed level and gas-to-oil exposure are not the same. It is not the oil-indexation as such which is a problem: considering their own risk policy and hedging strategies, this should be a motive power for end-users to prefer an oil-indexation than a hub floating price, or a fixed price. But when purchasing/tendering, all customers should be in position to get the best 'starting' level from both signals (border value versus hub price), not depending on which type of price exposure they want to select (fixed price, oil-indexed price, hub floating price).

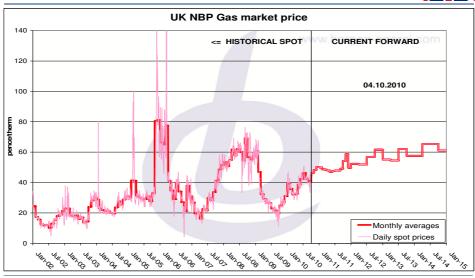
4.2.3 Local gas-to-gas competition has different shapes

However, the coexistence of these two different price models for the same commodity does not impact the local end-user markets in the same way:

• <u>UK/Ireland</u>: half of gas imports into the UK are still oil-indexed. But on the end-users side, all suppliers are retailing gas on a value which is linked to local market prices on the National Balancing Point (NBP). There is only one price signal and oil-indexed imports does not compete with hub exchanges when it comes to set prices for consumers.

United Kingdom: NBP Hub Prices, 2002 – 2014





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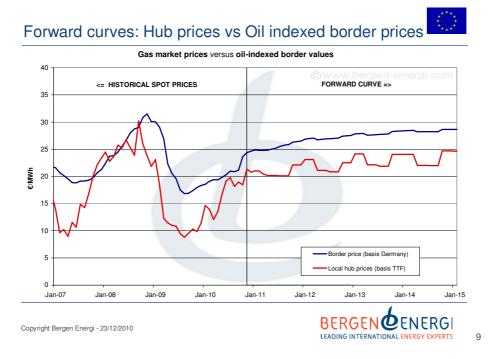
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- The Netherlands: historically, Dutch producers have sold their local production based on the gas-to-oil value, both for local and export markets. But to react to the development of the TTF hub and to adjust to new competition, we have seen that local sale at fixed price and/or on oil-indexed formulas are now adjusted by all active suppliers to TTF forward levels. Like the British retail market, there does not exist any competition between gas-to-oil and gas-to-gas levels.
- Other countries in North-West-Europe: Belgium/Luxemburg/France/Germany/Denmark/Sweden):
 We experience that both gas-to-oil and gas-to-gas price signals do exist and compete, resulting in less transparency in effective market prices.

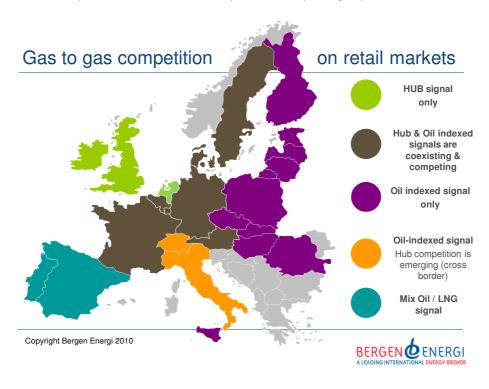
That particular situation is considered positive given that there is an imbalance in the gas market: lower gas prices on hubs compared to gas-to-oil value do help the development of competition, creating an incentive for end-users to challenge their current suppliers, at the same time as new entrants will compete with incumbents.

Strategies used by suppliers to create two different retail segments (large industrials having access to free market prices when mass markets being maintained to gas-to-oil levels) did not succeed in all countries and consumers segments.



- <u>Italy</u>: very few large industrials were able to benefit from oil/gas decoupling and to access gas-to-gas market levels. Those benefiting were mainly very large strategic consumers for local suppliers and/or for industrials who were able to manage transmission capacities from adjacent more competitive markets (Germany, Austria).
- Spain/Portugal: local imports are based both on oil-indexed value and LNG prices. But the retail
 market seems not to be in position to take advantage of that competition and current decoupling.
 There is no transparency regarding local wholesale exchanges on the virtual point (AOC), neither for
 spot nor forward contracts. As a consequence, no transparent price signal does exist for retail
 markets.





The map hereunder shows an estimate picture on dual price signal per market area:

It is commonly perceived that both the economical crisis and development of unconventional gas (eg shale gas in the US), have conducted to the gas surplus in Europe, which again explains the large oil/gas decoupling.

Most analysts do estimate that all end-users gained from lower gas prices in 2009 and 2010. Nevertheless that situation should be seen differently by market segments:

- <u>large consumers</u>: in most markets, large industrials were able to prolong their supply contracts for 1 to 3 years with a price level closer from gas-to-gas value, not gas-to-oil levels. This resulted in gains up to 30 to 40% (forward hedging).
 - Even more, some industrials, willing and able to stay exposed to short term maturities, (considering both volume and price risk management) have bought volumes at spot prices or short future maturities (day-ahead, month-ahead, front season) with discounts up to 50%.
 - But, industrials experiencing a large consumption decrease during the crisis and being unable to respect their own take-or-pay clauses were in general able to renegotiate their supply contracts: take-or-pay penalties were not paid to suppliers in exchange of contract prolongation at a level still close from gas-to-oil value, not hub market forward pricing.
- SME's, professionals and households: most small industrials and mass markets have also seen a
 certain decrease in gas prices paid in 2009 and 2010. These lower prices are only due to lower oil
 prices.



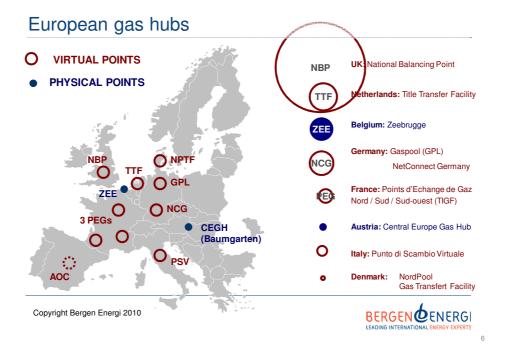
4.2.4 Are market prices in different hubs comparable?

Attention should also be given to the fact that all hubs and exchanges should develop price signals that could be easily compared, meaning they are set towards comparable price elements.

A first distinction seems to be made between different virtual trading points (hubs), resulting in prices not being comparable. For example, it is not always clear if additional costs for entry capacities in local transmission networks have to be paid by shippers to inject volumes into the grid or if hub purchases are already "entry paid". We have experienced differences between suppliers in this matter and how they are transferring theses costs to end-users.

Some differences could even exist between hubs which are virtual points and others which are only physical points. We can observe that liquidity on virtual points is growing much faster than on physical point hubs, even if the latter do already exist at the early time of the deregulation process.

More significant is that trades on these physical points are mainly done OTC between shippers and this situation is not giving the market the incentive to develop transparency and future products trading.



4.2.5 Higher volatility in hub gas prices than in oil-indexed value

End-users will need new instruments to face and hedge gas price volatility.

Actual gas prices on hubs are more volatile than oil-indexed gas prices. This can be explained by at least one fundamental and one technical factor:

- Gas is much more difficult and expensive to store, transport and reroute than oil (gas has more limited storage capacities, less flexibilities in routes, higher costs to liquefy and regasify);
- Oil-indexed gas formulas do include rolling averages to smooth and delay oil volatility.

In the future, with the development of more LNG imports within Europe and the diversification of import sources, we can expect the internal gas market being more and more impacted by global influences and by other main gas market (America, Asia) having different pricing models than the European one. This should conduct to more volatility in gas prices, both for pipeline and LNG imports.



The huge development of gas-to-power generation, both as a semi-base resource and also as a flexible instrument to adjust with renewable production, should also imply a higher gas price volatility in the future. This is evident for gas prices on hubs which are impacted by local supply and demand equilibriums.

All hub gas prices in Europe are for the time being driven by prices in UK, NBP being the only real liquid market in Europe. When liquidity on European hubs will increase, we should also expect higher decoupling between these different hubs, each will react to different drivers depending on its own localisation (both for demand and supply).

4.2.6 A single gas market index for Europe?

One single common price level throughout Europe is not the aim in itself. However, for each market area (hub), a transparent price model should appear, both for spot and forward trading.

This way, regulators and traders would not have to use proxy-formulas to be able to retrace the composition of the price.

Gas-to-gas competition needs to be improved in order to make hub references valid for all sales to end-users. Market players and consumers are depending on full transparency on these hub prices, for short term maturities alike for future deliveries. That is why the existence, for each hub of 'official' exchanges quoting spot and futures is essential.

Further, some players expect having to deal with only one single market reference. We do not necessarily see how this could be an objective, but we believe the market needs new instruments to trade or hedge positions:

- an EU-wide gas index combining different hub prices;
- some contracts for difference between hubs.

4.3 Direct market access for end-users

Direct market access gives the ability to trade on virtual points, either via bilateral OTC agreements (eg. EFET contracts) or via exchanges. As for the electricity market, we assume that many large and medium sized consumers are expecting to get access directly to the gas market, especially for those having several locations through different European countries.

Direct market access will enable consumers to handle and manage European wide portfolios and risks, even though very few suppliers are in position to supply all market areas at present time.

Direct market access **PLACES** Financial and physical operations **COUNTERPARTS** managed with Bergen Energi support Wholesale Virtual point Market access **SUPPLIERS** Portfolio management (exchange or OTC) & brokers Forecasting Capacity rights Nominations **Transmission** SHIPPER network (TSO) Balance management Consumption **END-USER** site Invoice control Reporting Copyright Bergen Energi 2010 BERGEN CENERG

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Main obstacles for market access are linked to shipping activities which are in the hands of physical suppliers. Some local developments are provided to help the situation, but in most countries the model implemented for this still suffer of complex matters like:

- unbundling between suppliers and shippers is not sufficient;
- there are some new players offering transmission and balance management, but without aggregated balancing portfolios and risks.

4.4 Profiling costs and modulation (swing)

This subject is probably the most important issue when comparing how suppliers are transferring costs to end-users. We have experienced large differences in pricing models which could partly reflect several cost elements and value chains. But some differences in supplier's approaches can not be explained as such and we believe that part of these differences have to be seen as the consequence of lack of transparency on the composition of hub prices.

A significant difference is that some suppliers consider that swing costs (price modulation between summer and winter, between week-days and week-end, etc.) are included in the market signal (future prices). Other suppliers do not share this understanding and therefore add costs for expected modulation requirements separately (nota: in both models, added flexibility costs for unpredictable needs could be added).

We experience that most suppliers follow these guidelines:

- <u>Suppliers managing the swing by using physical storages:</u> they add a modulation cost to the commodity price, often to be paid for a fixed fee (subscription). Depending on each consumption profile, this cost could vary on average from 0 for flat profiles to 5€/MWh for heating profiles. In some specific cases, some suppliers are giving a price discount for consumers being anti-seasonal (more consumption during the summer-season).
- <u>Suppliers managing the swing from the market</u>, either from spot deliveries or forward hedging: they do not add or subtract any profiling costs, assuming that the market price signal already includes profiling costs.

Such differences in supplier's models could be seen as normal if they were reflecting different value chains and more or less competitive positions. The difference in suppliers models does not explain why some suppliers do not price the profiling costs the same way if the customer is buying a floating price toward a hub reference instead of an oil-indexed formula. Suppliers should however be given the obligation to create transparent price models (ie not integrating profiling commodity costs in transmission prices), and instruments increasing transparency must be given.

The situation can be briefly summarized by the difference between electricity and gas markets, as illustrated below:

Electricity:

Price = alpha * Market price Peak hours + beta * Market price Off-peak hours + transaction fee

All elements of the price formula are transparent.

Gas:

Price = Market price (base) + (modulation cost and transaction fee)

There is no transparency on the split between modulation cost and transaction fee.



5 Specific questions from CEER

1. What are in your view the main goals to be aimed at by the gas target model beneath the high-level policy goals set out by the 3rd Package?

In our opinion the following main goals should be aimed at:

- provide (or improve) direct market access for end-users, in order for them to be in position of buying volumes in different point of time and not being linked to the market model of one single supplier.
- get one single price model for all gas sales in Europe. The main goal should not be the convergence between hub prices throughout Europe but convergence between future hub prices and oil-indexed forward import prices (on 12 months average, to smooth different seasonality for both signals).
- developing financial instruments making it possible for consumers to hedge their price risks: transparent future products for every hub, eventually new contracts to hedge the difference between different hubs.
- encouraging any model in favour of up-stream competition between pipelines and LNG imports, between long term secured contracts and flexible gas, between oil-indexed gas value and local hubs' gas prices.
- 2. What are in your view the major developments and anticipated changes in the European gas market (on national and international level) and where would a target model bring added value? Including:
- a. the role of long term capacity contracts in the future European gas markets;
- b. the role of hubs / gas exchanges.
 - We still consider that long term contracts are a key point to make needed investments possible, both
 for new pipelines routes to Europe and for new LNG terminals. Price clauses in these contracts
 should adapt to a gas market being more and more affected by global developments, and for this
 integrate more spot references.
 - Development of more exchanges in local hubs within Europe is a key point to make the price signal more reliable, also to make competition easier between players not having physical positions (sourcing/storage/transmission capacities) in every country.
- 3. What are in your view the key elements of a conceptual model for the European gas market to contribute to non-discrimination, effective competition, and the efficient functioning of the internal gas market? Please include views on the key aspects of market design such as, capacity allocation and congestion management procedures, network tariff arrangements, wholesale market pricing, balancing arrangements and, gas quality specifications? Please consider the interaction of these arrangements.
 - Hub exchanges: Making it mandatory for all imported volumes to be sold once on the hubs, including clearing by an official exchange. This would make hub gas prices more reliable for procurement and hedging management.
 - <u>Competition and transparency in shipping business</u>: split of the value chain between integrated players: importer => trader => shipper => supplier to end-users.
 - <u>Flexibility market-oriented instruments</u>: to help new entrants to manage modulation (expected seasonality), flexibility needs (short term month-ahead and day-ahead adjustments to forecasted consumption) and participation to new balancing market based models (intra-day).
 - <u>Capacity allocation</u> (LNG terminals/storages/transmission grids): 1/ systematic UIOLI rules; 2/ Time scale allocation rules for existing and new capacity rights, for example: 40% long term allocations (5-20 years), 40% medium term allocations (1-5 years), 20% short term allocations (spot to 12 months).



- Network tariffs: 1/ regulated, not negotiable; 2/ more equivalent tariffs for any entry/exit/transit point of each market area; 3/ combined allocation rules and tariffs for adjacent networks and routes between hubs.
- Wholesale market pricing: 1/ transparent hub prices have to become relevant for all retail sales in any customer segment (not only for flexible gas being exchanged between gas players and/or for larger industrials when the market is long); 2/ existence of future contracts for each hub where local prices are used by suppliers in retail sales; 3/ market coupling
- <u>Balancing arrangements</u>: 1/ market based tariffs; 2/ added penalties will not exist when shippers are invited to participate to the entire market zone balance; then they are not responsible only for their own portfolio.
- Gas quality specifications: 1/ common and large gross calorific value bandwidths; 2/ obligations for adjacent transmissions system operators to define rules regarding gas odorisation; 3/ TSOs to develop new offers for physical swaps from one hub to another hub.
- 4. What level of detail, e.g. level of harmonisation, do you expect from the CEER vision paper on a conceptual model for the European gas market? For example:
- a. Do we need a definition of an EU-wide gas day? If yes, what should this definition be?
- b. How deep should the "reach" of the EU gas market model be, i.e. should it encompass DSOs? Is there a trade-off between vertical depth (i.e. including all levels of national gas markets) and horizontal depth (i.e. integrating balancing zones cross border)?
 - Level of harmonization: We expect the CEER vision paper to set detailed goals in order to reduce the possible adjustments in each market. Players (shippers and transmission/distribution grid operators) should agree on local suboptimal models when this increases the efficiency in the global market.
 - <u>DSOs local rules</u>: Distribution matters should be included when it comes to make possible for endusers to access directly to the market (hub purchases).
 - <u>EU-wide gas periods</u>: We believe it is necessary to converge towards common gas periods, both for physical positions (storage capacity booking) and for financial products (future contracts). The market also needs a convergence with electricity market products.
 - In this respect, seasons should be defined as 6 months winter (October to March) and 6 months summer (April to September).
 - Having an identical gas day (from 06:00 to 06:00) throughout the EU would also be a significant improvement.
 - To go further, it could be considered to shift to standard day hours (0:00 to 24:00) as for power.
 - <u>Balancing zones</u>: Further integration of balancing zones within each country should be a priority.
 When possible, setting cross-border balancing area could also be evaluated. A first step could be to make balancing regimes more closer, working with the same principles (limits, tariffs) and systems, in order to implement cross-border imbalance netting possibilities.

5. Which areas or aspects of the gas market should be affected by the target model and what are the constraints for such a model?

- <u>Shipping activities</u>: the gas market model should focus on more competition in shipping activities, including transmission and storage matters.
- <u>Transparency on price signal</u>: importers should be obliged to sell entry volumes on hubs to other counterparts with exchange clearing. Or at least have the obligation to report on border transit prices.

6. Which areas or aspects of the gas market should be excluded from the target model description and left to national/regional decision making

• <u>Tariffs levels</u>: a target model should focus on principles and common rules and system structures. Tariffs levels should remain national/regional decisions.



- 7. What are the options for integrating the currently fragmented European markets? Are there any existing models you would like to recommend? In case your answer is yes, we would be interested to learn about the features of this model and if there are also any draw-backs in this model in your view.
- a. Should we merge balancing zones to create cross border or regional balancing zones or market areas? How many balancing zones does Europe need and how big should they be?
- b. Is the coupling of market areas as it is being developed in European electricity markets appropriate for gas?
 - Market coupling: this would support efficient use in cross border capacities and bring lower volatility in gas prices, as well as the emergence of one single price reference for Europe (or some few references, one for each major market zone: for instance North-West Europe, South, South-East, Central East).
 - Relevant mechanisms for gas market coupling needs to be different from mechanisms regarding electricity power, because of gas physical properties: daily balancing (line pack), no indigenous production in most local markets (some net direction flows need to be guaranteed for security of supply).
 - <u>Balancing zones</u>: a first priority should be to get one single balancing zone per country and common balancing mechanisms throughout Europe, including netting of cross-border imbalances.
 - <u>Balancing regimes</u>: after the Dutch new market based system being evaluated, TSOs and shippers
 could see how this system could be efficient throughout Europe for lower balancing costs and easier
 balance management (security of supply to delivery points).
 - Hub to hub combined capacity booking: standard products should be commonly developed by adjacent TSOs to make it easier to transmit gas volumes from one hub to another (combined entry/exit/transit capacities).
 - <u>Virtual storage offers</u>: swing and modulation management being a major difficulty for new entrants, the market should support any initiative from TSOs or other participant to launch virtual storage solutions.
 - <u>Virtual point access / Licence to be its own supplier</u>: some experiments do exist in France or Germany. End-users need even more easy doing models where they themselves own the exit capacity and where supply/trading rights and obligations are split from shipping duties.
 - <u>Joined capacity offers</u>: Fluxys/GRTgaz have launched an experimental offer to book month-ahead available capacities between Zeebrugge hub and PEG Nord market area. This should be an attractive offer, especially when it would develop further with day-ahead products, as well as far maturities (several years ahead), in line with Future products traded both on Powernext and Endex.