

# Impediments to Gas Trading in South South East Europe 2009

Austria, Bulgaria, Czech Republic, Germany, Greece,  
Hungary, Italy, Poland, Romania, Slovakia and Slovenia



the 1990s, the number of people who have been employed in the public sector has increased in all countries.

There are a number of reasons for the increase in public sector employment. One reason is that the public sector has become a more important part of the economy. In many countries, the public sector now provides a significant portion of the total output. This has led to an increase in the number of people who are employed in the public sector.

Another reason for the increase in public sector employment is that the public sector has become a more attractive place to work. This is due to a number of factors, including the fact that the public sector often provides better benefits and job security than the private sector. Additionally, the public sector is often seen as a more stable and secure place to work, especially in times of economic uncertainty.

There are also a number of other factors that have contributed to the increase in public sector employment. For example, the growth of the welfare state has led to an increase in the number of people who are employed in the public sector. Additionally, the expansion of government services has led to an increase in the number of people who are employed in the public sector.

Overall, the increase in public sector employment is a result of a number of factors, including the growth of the public sector, the attractiveness of public sector jobs, and the expansion of government services. This trend is likely to continue in the future, as the public sector continues to play an important role in the economy.

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# Introduction

In 2006 the European Regulators' Group for Electricity and Gas (ERGEG) launched the Electricity Regional Initiative (ERI) and Gas Regional Initiative (GRI). ERI and GRI are European based initiatives which have been set up in order to make a real contribution to the integration of national markets by facilitating the creation of regional energy markets in the fields of electricity and gas. The GRI has established three regions in Europe which together form the Gas Regional Energy Market (REM).

PricewaterhouseCoopers analysed already in 2008 one of these regions with a view to highlighting the impediments for gas traders. In this update we take a stronger focus on the trading points and exchanges in this Regional Energy Market. A comparison with the last trader survey shows the changes in the market and the trader's expectations.

Our survey placed again on a focus of regulatory, administrative and information-related impediments for gas trading of the region 'South-South-East' Regional Energy Market Initiative of ERGEG.

PricewaterhouseCoopers has a worldwide network of energy experts covering the areas of energy, utilities and mining, together with which we analysed the national markets. We asked traders which are active in these markets to share some of their experiences and frustrations. Our intention is that, on the basis of the research carried out and combined with the results of the survey, we will make a valid contribution towards the further development of regional energy markets.

At this point we would like to take this opportunity to thank the European Federation of Energy Traders (EFET) for the support they have given towards the survey.

For the purpose of the survey we sought the opinions of 24 European gas traders which are active in at least one of the markets. The survey results show that there are only certain improvements compared to the last year but also some certain issues are now worse, i.e. access rules to trading location. In total we can state that there is only a small progress in the development to a common regional energy market

Access to infrastructure (transmission and storage) is still the main barrier for trading in this regional gas market.

Regarding the leading trading place in the region the traders have still high expectation into the CEGH trading location Baumgarten but in the view of the traders the German virtual trading points NetConnect Germany (NCG) and Gaspool (GUD) will be the leading trading points in this region.

Looking ahead there is still a considerable need for a clear regulatory framework that should provide greater ease and transparency for energy traders. The survey sets out some of the next steps that could be taken.

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Partner, Energy

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## Survey Highlights

Interest of trader's community in this regional gas market is still high. Traders now are active in more markets than last year. This could be a result of the entire market opening in the last year. But trader's also stated that they would be more active in more markets if the conditions would be approved and better. Market rules are still not unified in the region and access rules to storage and hubs (PSV, CEGH) are found to be more complex compared to the last year.

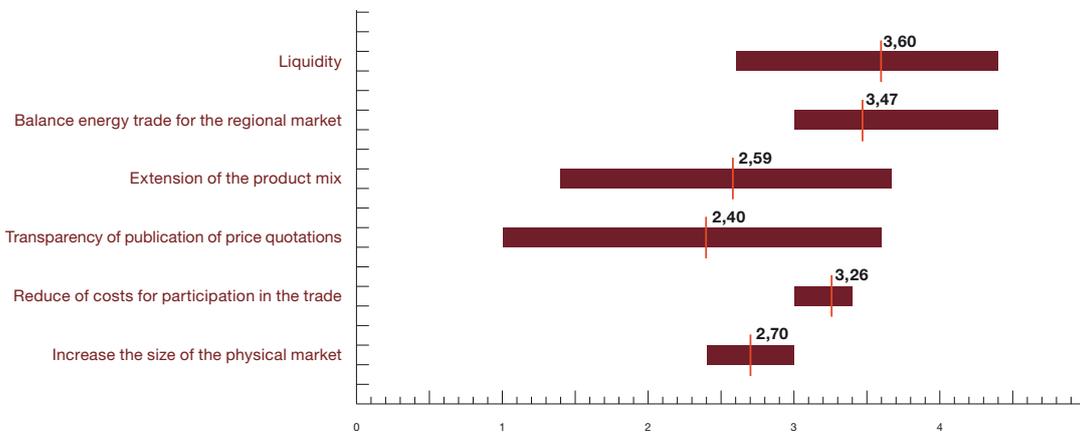
In the trader survey this year we had a stronger focus on trading points. The main result shows that the CEGH trading point Baumgarten is still seen as one of the best suited hubs to take a leading role in the regional market but due to complex rules and complex systems traders see the German virtual trading point EEX NetConnect Germany as the future leading trading place for the region. For any further gas exchange in the region, trader's give a clear picture that the physical trading at flanges is far more complex than at virtual trading points which are de-connected from the physical flow. This confirms again that well designed virtual trading points within entry-/exit-systems are necessary for the region.

Compared to the last year we can see that there is an improvement on the different IT-systems, especially on the software compatibility. On the other hand traders have to pay now more for additional implementation costs.

Traders have also pointed out in this survey that still considerable administrative and regulatory impediments to market access remain. The idea of an independent entity that would work towards ensuring the non-discrimination of access to transportation capacities would be welcomed by 60% of traders. Traders still have the impression that capacities booked sometimes are not physically used (capacity hoarding). Congestion and effective interruption of transports are the main reason for the premium on spot prices in Baumgarten.

Traders' responses indicated that the level of gas storage capacities available in the region is still not sufficient. This level of acquired capacities cannot be increased in the short and medium term; therefore not used capacities should be made available to market participants through market oriented auction mechanisms which are already in place. Traders also quoted that SSOs are offering different products which are not competing to each other.

Increase liquidity on the trading points but also on the exchange is a major issue for the traders. Beside liquidity already balancing energy is also from high urgency for the traders. Reduction of balancing and tariff zones is requested urgently. Traders want to be able to trade balancing energy at trading points and call for separated clearing and settlement companies. That means that balancing energy should not be procured by TSOs directly with some traders but should be transparently procured by the exchanges in a market-based way.



**Figure 1:**  
Average and ranking of all measures for all trading points (hubs) where '5' represents the most urgent measure

According to 62% of the traders' surveyed, the ownership and shareholder structure of a hub is influencing its functioning. Taking into account that CEGH is one the leading hubs in the region the ownership structure at CEGH has to discuss this issue for their further development.

The implementation of universal IT system standards creates considerably high potential for the reduction of transaction costs for traders. Different and incompatible platforms for nomination and trading reduce levels of usability and can slow down procedures. The top measures cited for improvement included decrease of software implementation costs and the decrease of current fees.

PricewaterhouseCoopers carried out an initial assessment of potential disadvantages or financial damages due to the gas crisis at the beginning of 2009, which could have been avoided through closer infrastructure connection and market coupling. One finding revealed that the financial losses outweighed any earlier and preventive investments in market integration.

European markets weathered the storm of the crisis in January 2009 due to well stocked gas storages until the gas deliveries resumed again. However, some large central and eastern European markets were struggling with the missing links to other markets and therefore could handle the gas shortfall only by restricting consumption to large consumers. Central and Eastern Europe states as well as the Balkans were hit particularly hard by the shortages in gas; yet some affected markets were able to overcome the crisis via accessing storage. However, Hungary, for example, with its high dependency to Russian gas imports, had to interrupt gas flow to large industrial consumers due to a loss of 79% of expected imports.

According to public Authorities, economic losses of the gas crises in the region account for hundreds of millions. In the South-East region with Bulgaria, Slovakia, Hungary, Serbia and Croatia the losses amount 750 Mio €.

Reverse-Flow investments in the South-East Europe region can be summed up to EURm 80 to 90, according to estimates of GTE+. With the help of the European Energy Programme for Recovery, up to 50% of the implementation costs of the accepted short-term projects will be allowed to subsidized.

Considering this special characteristics, Slovakia was badly hit by the January 2009 gas crisis and therefore now seeks to increase the storage capacity of the country. Having no access to supplies from Germany and Baumgarten, other than new Reverse Flows, Slovakia would have struggled to meet the country's gas demand for the entire 14-days of the crisis. Therefore, the country is in discussion with Russia to set up a joint venture between Gazprom and Slovak partners in order to distribute natural gas in Slovakia as well as to increase the potential of gas storage facilities. Poland, on the other hand, is also highly dependent on Russian gas imports, but is traversed by two supply routes and could therefore meet the demand by increased supplies via the Yamal supply route. The Czech Republic did access available import capacity from Germany in order to increase gas supplies from Norway. Part of the imported volumes had furthermore also been used to supply Slovakia.

Several efforts and measures have been taken on a regional and a European Level, including the early warning mechanism agreement between the EU and Russia and a conjoint revitalisation of the Ukrainian transit system.

Nevertheless, if there had been an efficient regional market with sufficing interconnection capacity the gas crisis would not have had such an economic impact on the countries in the region.

A competitive single European gas market is the prerequisite for efficient and competitive gas trading in Europe. Throughout the course of their day-to-day business, traders have to face a number of market barriers, dealing with lack of transparency as well as other administrative obstacles which prevent the free flow of their commodities. These obstacles also prevent end consumers from obtaining gas at reasonable costs and based on their own choice of provider. On the other hand, the national markets are gradually opening up and acting as international gas hubs, with Central European national gas hubs such as the CEGH, PSV and the trading points NCG (EEX) and GUD (EEX) serving as leading examples.

REM's primary objective is to make the South South East markets coherent and interoperable. Some major obstacles, especially in the field of the gas trade that touch upon the interconnection of the markets, are considerable impediments to open and efficient levels of trade. Interconnection and storage capacities are currently being allocated so as to ensure improvements in this area. If balancing energy were traded and transmitted between countries, its prices would be more market oriented. Cross-regional regulatory coordination would be beneficial in terms of improving the above mentioned shortcomings. They would also further integrate the market, thereby creating one individual and coherent entity.

PricewaterhouseCoopers went to the very core of the market by questioning the trader community in a gas survey with the intention of establishing how various trade obstacles in South South Eastern European gas markets are perceived by gas traders. The survey was supported by EFET. It should be noted that PricewaterhouseCoopers asked the traders to answer the questions only with regard to countries which are foreign markets to them. For example, if the core business and head office were located in Austria, the traders there would omit giving answers with reference to the Austrian market in the evaluation.

In the following section the result of the survey will be presented for following topics:

- Trader activity
- Transportation
- Balancing energy
- Trading platforms
- Gas storage
- IT system

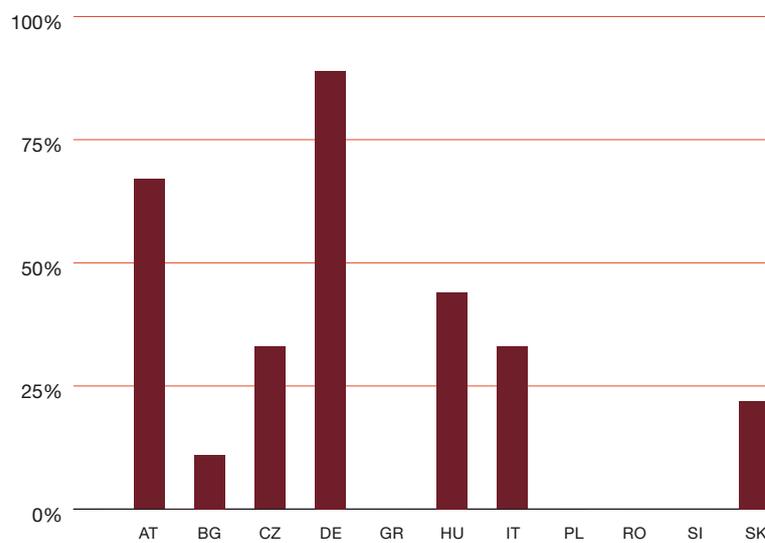
### Trader activity

Access to the end consumer market is perceived by traders as an important asset. However, in many countries internal regulations and different legislative frameworks still produce significant barriers to end consumer market entry.

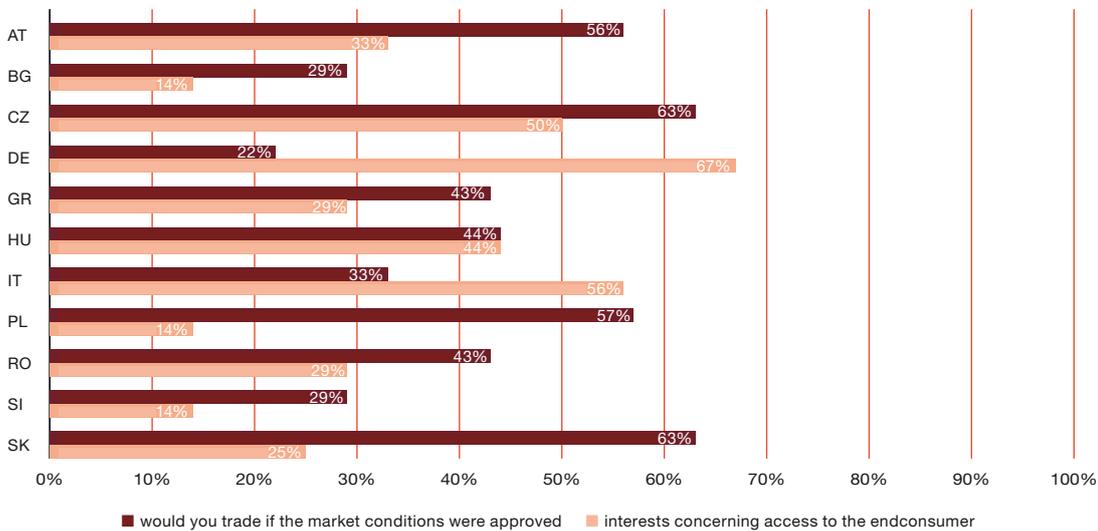
### Market entry

In the survey, PricewaterhouseCoopers asked traders about the markets in which they are active. 89% of traders are active in the German market and 67% in the Austrian market, followed by the Hungarian (44%) and the Italian and Czech Markets (33%). A number of 22% of traders are active in Slovakia and 11% in the Bulgarian Market. No activities of traders were reported for the Romanian, Slovenian, Polish and Greek market, as shown in Figure 2.

**Figure 2:**  
Markets, where traders who  
have responded are active

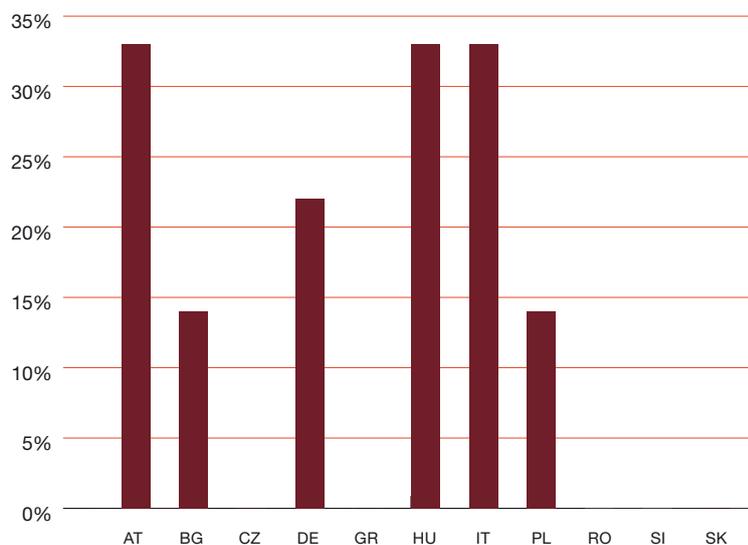


Non-active traders consider trading in markets, where market conditions are approved, for the Austrian, Czech and German markets as most interesting at the moment. Among non-active gas traders wishing to gain access to end consumers, the currently most attractive countries to enter the markets are Germany and Austria followed by Italy, as set out in Figure 3.



**Figure 3:**  
Traders' view: Interest of non-active traders

The following chart indicates the countries where the active traders perceived distortions within gas trading. Hungary, Italy and Austria are the three countries where the trader community experienced, in comparison to the other countries, the highest extent of distortions.



**Figure 4:**  
Traders' view: Distortions within gas trading of active traders

## **Transportation**

Gas transmission systems, and above all the availability of transportation capacities, are important factors when it comes to the proper functioning of gas markets in Europe. At present, gas flows in Europe follow the East-West and North-East transmission routes via pipelines. The increase in LNG capacities will change this trend in the long run, however as from now gas traders and shippers in the South South East Region will face contractual and/or physical congestion between market areas with low gas prices to market areas with high demand and high prices, for example to Italy.

On the new Entry/Exit tariff system to be implemented according to the provisions in the Regulation (EC) 715/2009 will lead to the emergence of virtual trading points. The interconnections between the different Entry/Exit tariff systems will need to be well-managed by TSOs to allow for easy gas trading between different virtual trading points.

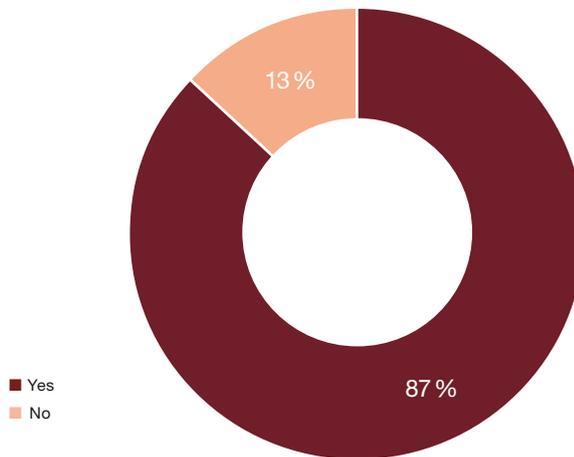
## **Physical transmission capacities**

PricewaterhouseCoopers asked the gas traders to evaluate the main Transmission System Operators (TSOs) with regard to the capacities offered by them for the transmission pipeline. A majority of traders stated that the transmission capacities of nearly all South South Eastern TSOs were not sufficient, RWE Transgas Net (CZ) was the only TSO named by the responding traders, which offers enough available capacity for the transmission pipeline.

### Standardisation of transportation contracts

Standardised transportation contracts which would be valid throughout the entire region were favoured by 87% of the respondents.

These results show that the idea of an R\_ISO in the South South East Region has still a considerable backing among the traders.



**Figure 5:**  
Traders' view: the idea  
of standard transportation  
contracts in the region

Furthermore, a 100% of the respondents share the opinion that standardised nomination and re-nomination periods would be welcomed.

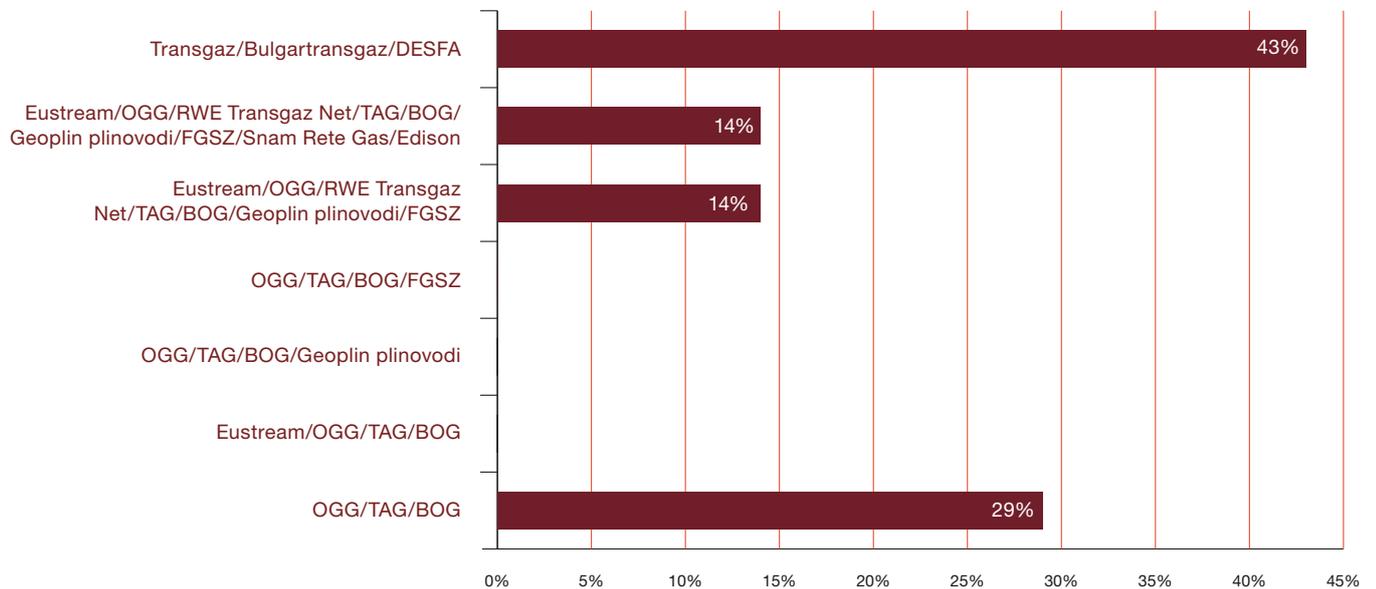
### Allocation procedure

All traders were asked to define the preferred allocation procedure. The traders had the possibility to choose between “Metered pro-rata”, “Balancing shipper”, “Not provided”, “Nomination = Allocation” and “According to shipper agreement”. The trader community prefers to 100% the allocation procedure “Nomination equal Allocation”.

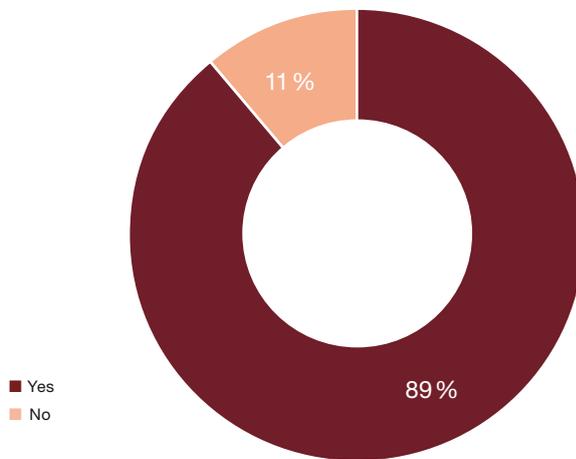
### Entry/Exit system

Regarding the Entry/Exit system, 43% of the traders prefer a merger between Transgaz, Bulgartransgaz and DESFA. Furthermore, 29% are in favour for a merger of the entry-/exit systems (which will be implemented according to the 3rd package after an implementation period) of 3 Austrian TSOs OGG, TAG and BOG, as shown in Figure 6.

**Figure 6:**  
**Traders' view: Merging TSOs most efficiently into an Entry/Exit-system**



89% of the traders are in favour of an independent entity which coordinates a discrimination-free access to the transportation network for more than one TSO in the region, while 11% of the respondents do not prefer such an entity.

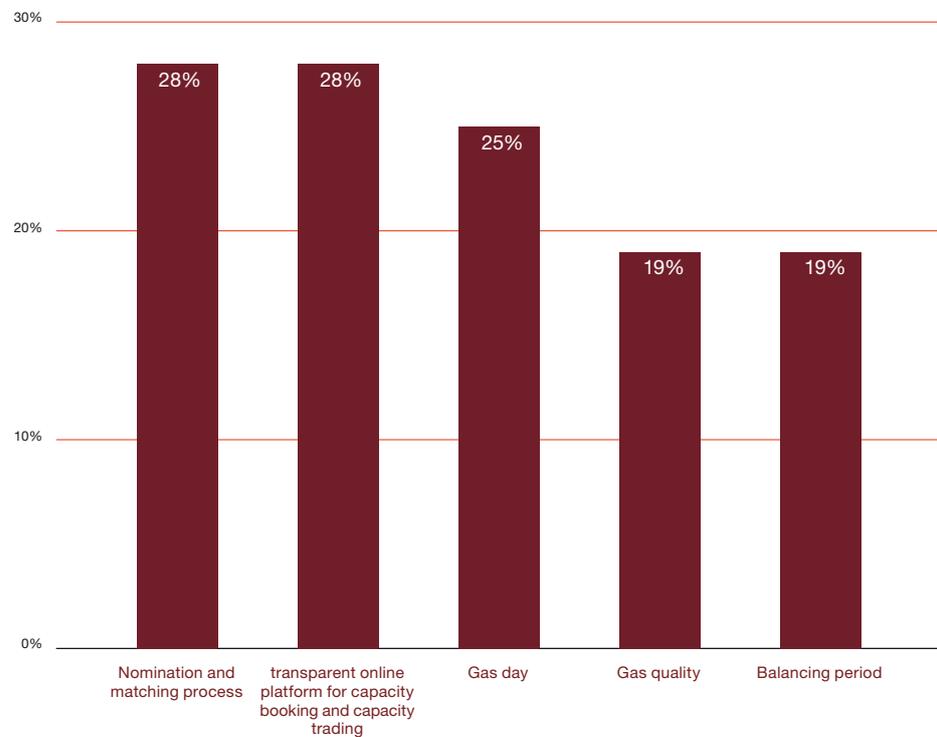


**Figure 7:**  
**Traders' view: Is an independent entity which is coordinating discrimination-free access to the transportation capacities necessary for the region**

## Harmonisation

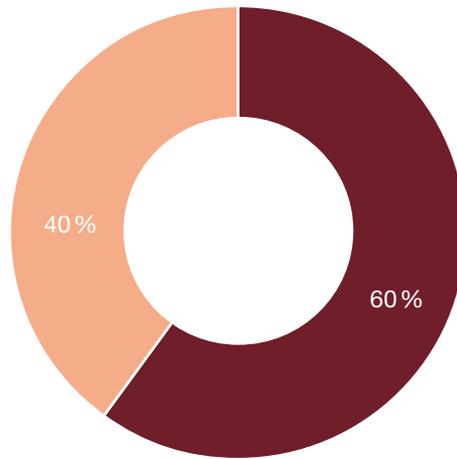
In the traders perspective the nomination and matching process as well as transparent online platforms for capacity booking and trading should be harmonized. Furthermore, 25% of the asked traders stated that they would prefer to have a harmonised gas day while 19% of the respondents are in favour for a common gas quality.

**Figure 8:**  
Traders' view: Practices to be harmonized



As the gas trading takes place in different countries, PricewaterhouseCoopers asked whether the trading community receives sufficient information in English from the TSO's. 60% of traders responded that enough information in English is received, while 40% would prefer to have more English information available, as set out in Figure 9.

Compared to the last survey in 2008 we notify an improvement and more TSOs are presenting information also in English.



**Figure 9:**  
Traders' view: Do you receive sufficient information from the TSO?

■ Yes, I receive sufficient information in English  
■ No, I do not receive sufficient information in English

### **Balancing energy**

Balancing energy is the difference between the scheduled and the real gas supply or demand within a given period. Integrating the balancing energy markets within the region would improve liquidity and the market orientation of the balancing energy prices.

Traders' statements regarding balancing energy prices were focussed still on the inability of various national legislative bodies to publish rules concerning balancing energy provisions in each of the discussed markets. The balancing energy regimes in the region have been brought in line with EU legislation, however the remaining loopholes affecting national laws continue to hinder progress towards the implementation of a market oriented balancing regime.

## Market oriented rules

Figure 10 summarises the traders' view on whether the rules are already market oriented or whether they should be more market oriented. Austria's domestic system and Germany shows the most market orientated balancing energy system. Czech Republic shows a progress compared to the last year. The respondent's perception is that the rules for the Italian und Hungarian market should be more market oriented. The strict separation of the balancing market from transit is seen as a barrier to the market.

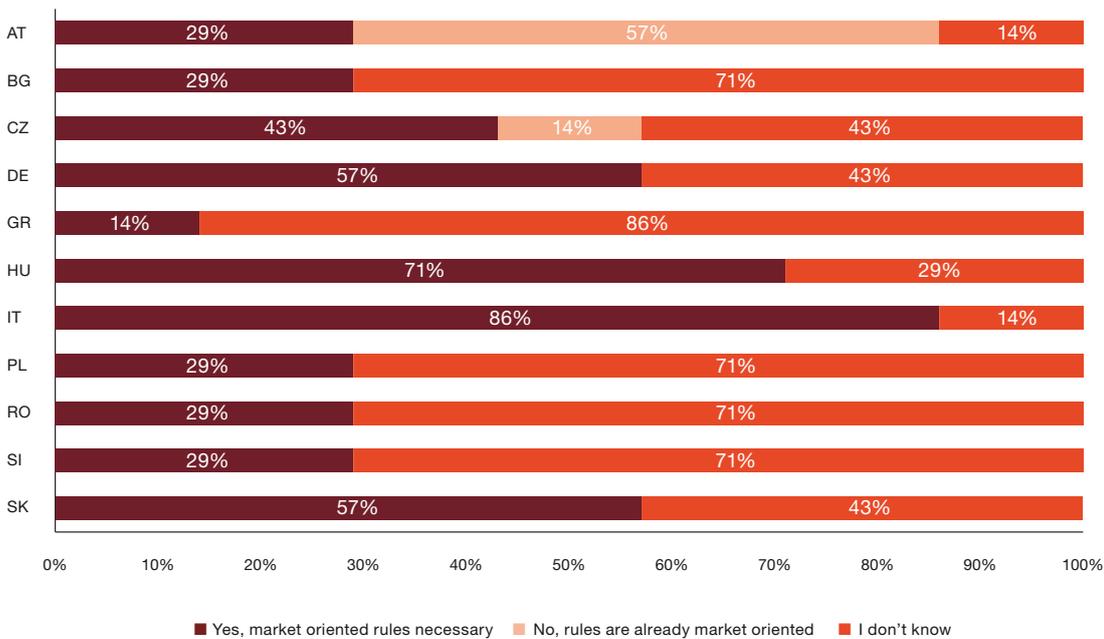
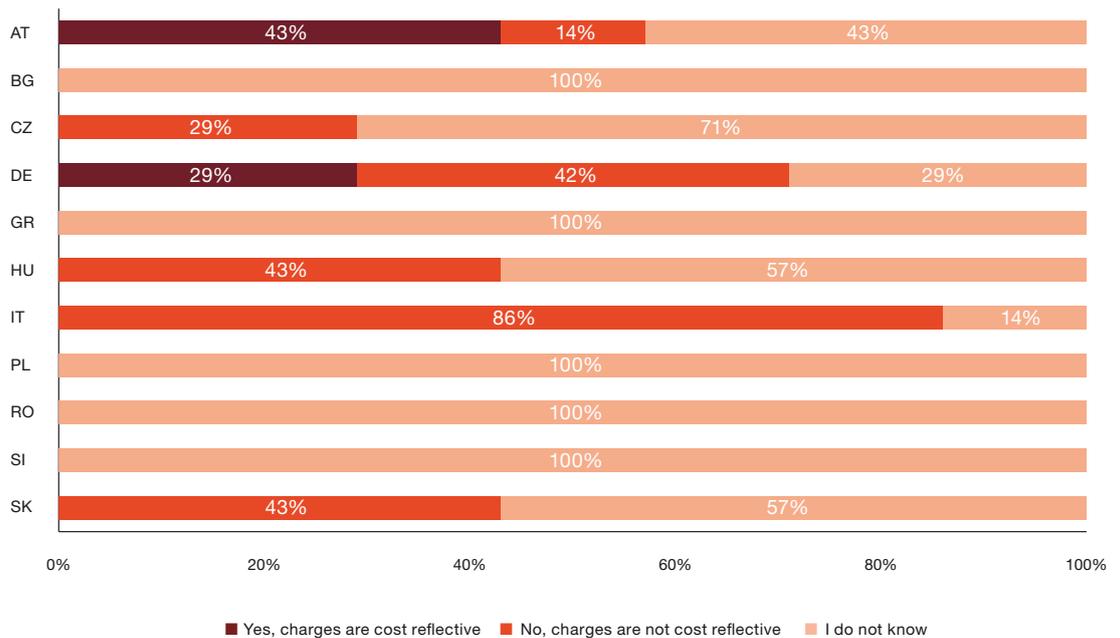


Figure 10: Traders' view – Should there be more market oriented rules in the national balancing market?

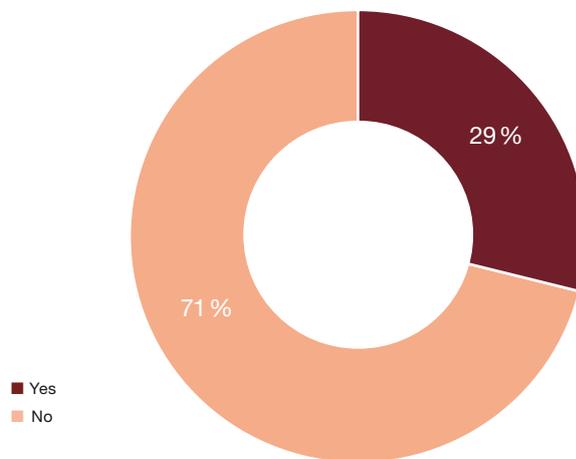
### Cost reflective pricing regarding imbalance charge

Market oriented pricing of balancing energy ensures a stable equilibrium between supply and demand at the most efficient possible cost for the end consumer. PricewaterhouseCoopers asked the traders to provide an assessment of markets regarding cost reflective pricing for balancing energy. As Figure 11 sets out, it can be seen that 43% of the traders think that the Austrian balancing regime in the domestic market offers cost reflective charges. The Italian, Hungarian and Slovak market do not have cost reflective charges in the traders perception. Cost reflective prices for imbalance charge can only be found in the Austrian and German markets, according to traders' view.

**Figure 11:**  
Traders' view: Which market offers cost reflective prices for imbalance charge?



As can be seen in Figure 12 below, 71% of the respondents prefer a separation of balancing markets for the national supply and transit market. This can be used as an indication for the markets with a separated balancing system for national supply and transit.



**Figure 12:**  
Traders' view: Separation of balancing markets for national supply and transit

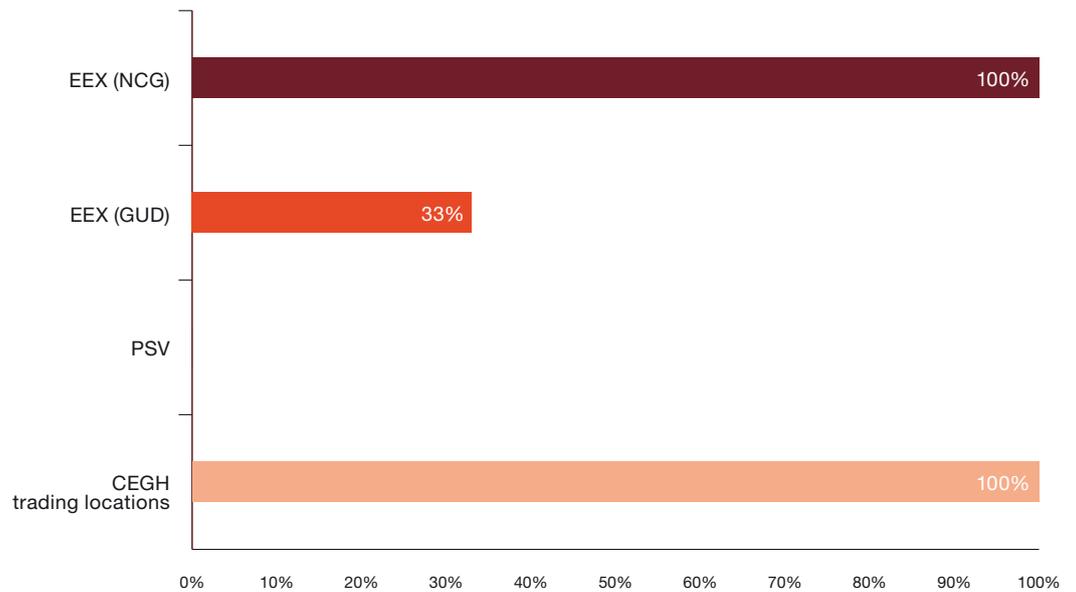
In addition 71% of the trader community stated that the liquidity of a national balancing market could be a reference for transit balancing.

### Balancing energy and hubs

Balancing energy is organised in most countries by the TSOs. Recent developments show that balancing energy could also be procured by TSOs at trading points in order to guarantee market oriented prices. We therefore asked traders for their views concerning balancing energy and hubs.

Figure 13 shows that 100% of traders selected the CEGH trading locations as well as NCG (EEX) as the hubs where the balancing energy market should be integrated for the region. For the CEGH trading locations that mean that they should be integrated and combined with the Austrian domestic balancing energy market.

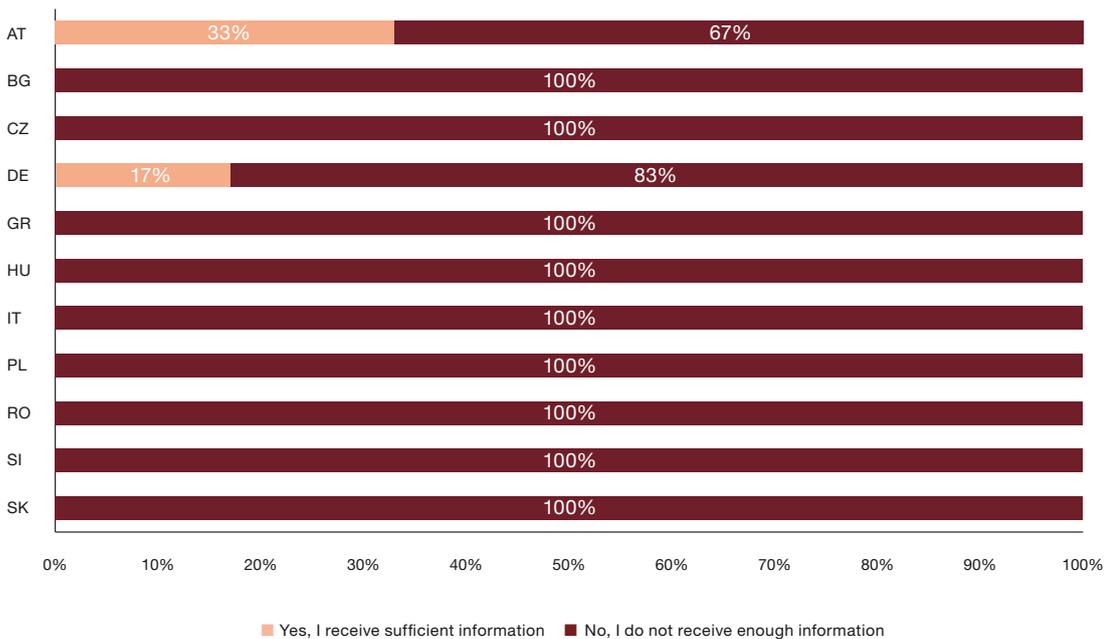
**Figure 13:**  
Traders' view – Hubs to be embedded in surrounding balancing energy markets



Furthermore, all traders responded that they are in favour of trading intra-day balancing energy on hubs.

## Access to information

Sufficient information on balance energy markets is an important prerequisite for analysing, understanding and entering a balancing market. Figure 14 shows an assessment of the extent to which balancing energy market information is made available to traders. According to traders' responses, sufficient information is partly received in the German and Austrian trading markets, however, the remaining country markets lack sufficient information supply concerning imbalance position from balancing energy market.



**Figure 14:**  
Traders' view – Sufficient information concerning imbalance position from balancing energy market

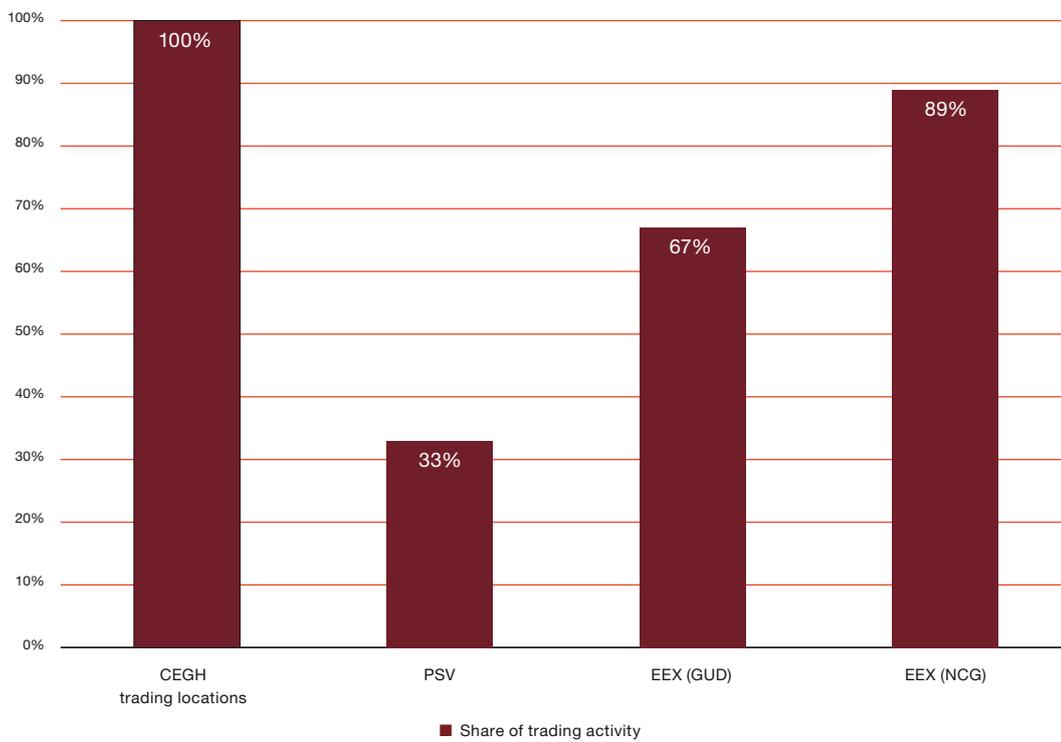
### **Trading platforms**

Up to now there have been 9 trading points, at 2 of which trading is possible via a gas exchange

- 6 trading points<sup>1</sup> managed by Central European Gas Hub – CEGH
- Punto Scambio Virtuale Milan – PSV
- Virtual trading point in the market area of Gasunie Deutschland (Gaspool) - European Energy Exchange EEX
- Virtual trading point in the market area of NetConnect Germany - European Energy Exchange EEX

<sup>1</sup> Trading locations of CEGH are: Baumgarten, Oberkappel, Überackern, Weitendorf, Murfeld and Mosonmagyóvár

Liquidity, in other words the trading volumes at the trading points, is a key issue. High liquidity attracts traders and enables an efficient clearing of the market at any point in time.



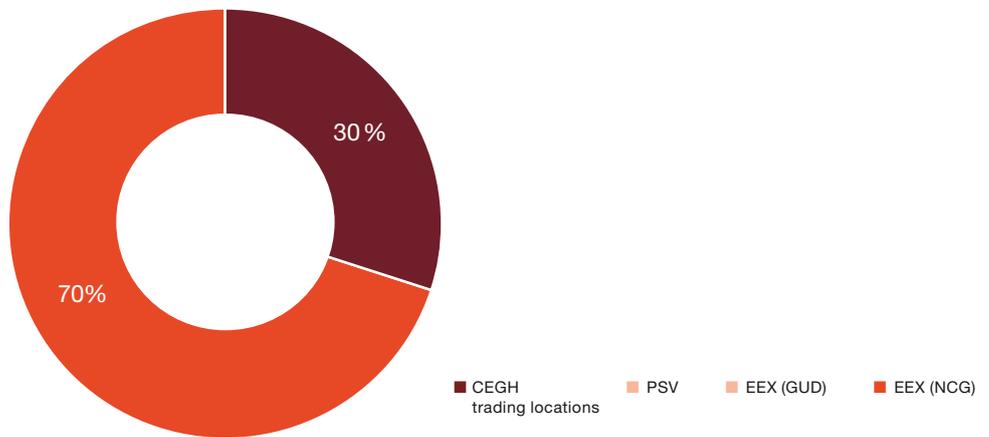
**Figure 15:**  
Where are traders active?

All of the respondents are currently trading by using the CEGH, as set out in Figure 15. The second most frequently used trading points of respondents in the survey are the NCG followed by the GUD virtual trading points.

Asking for other trading points as the above mentioned, traders' responded that they are currently trading or were trading in past at Waidhaus, Hora Svate Kateriny, NBP, TTF and PEG.

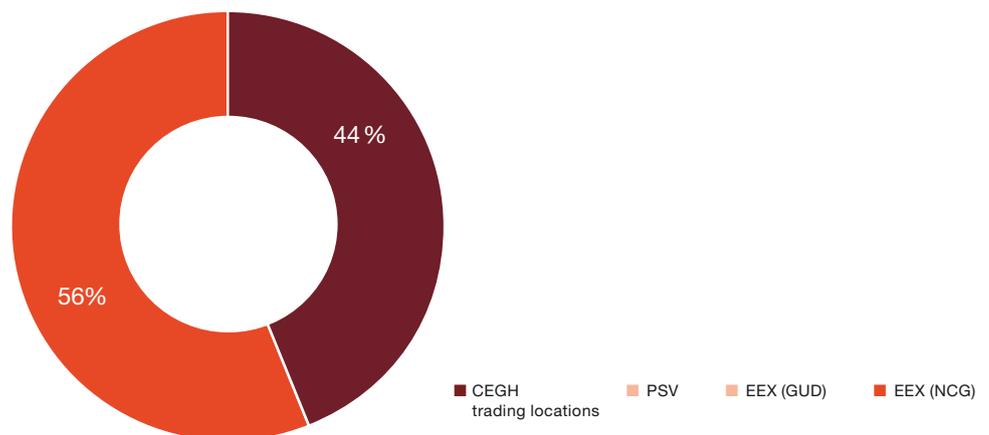
When it comes to the future importance of a hub, 70% of traders said that the NCG has the best chance of becoming the most important hub in the region surveyed.

**Figure 16:**  
Traders' view: Best chance to develop to the most important hub in SSE



Compared with the best suited trading point as the regional trading point is, according to traders' response, NCG followed by CEGH.

**Figure 17:**  
Traders' view: Hub/ex-change best suited as a regional trading platform



Compared this with the last PwC Trader Survey CEGH trading location Baumgarten has lost the leading role of the best suited trading point to NCG. The main reasons are the complex rules, higher cost for software and IT systems but also missing virtual trading points.

Furthermore, 100% of the respondents state that they would welcome a daily quoting of a regional gas price index where this would be technically and economically reasonable. When acting as a shipper all traders' surveyed would welcome the opportunity to hedge the position for any entry-exit point at any other hub in the region.

Some traders made additional remarks on this topic, that NCG and GUD are considered for OTC, broker based and EEX trading as a whole.

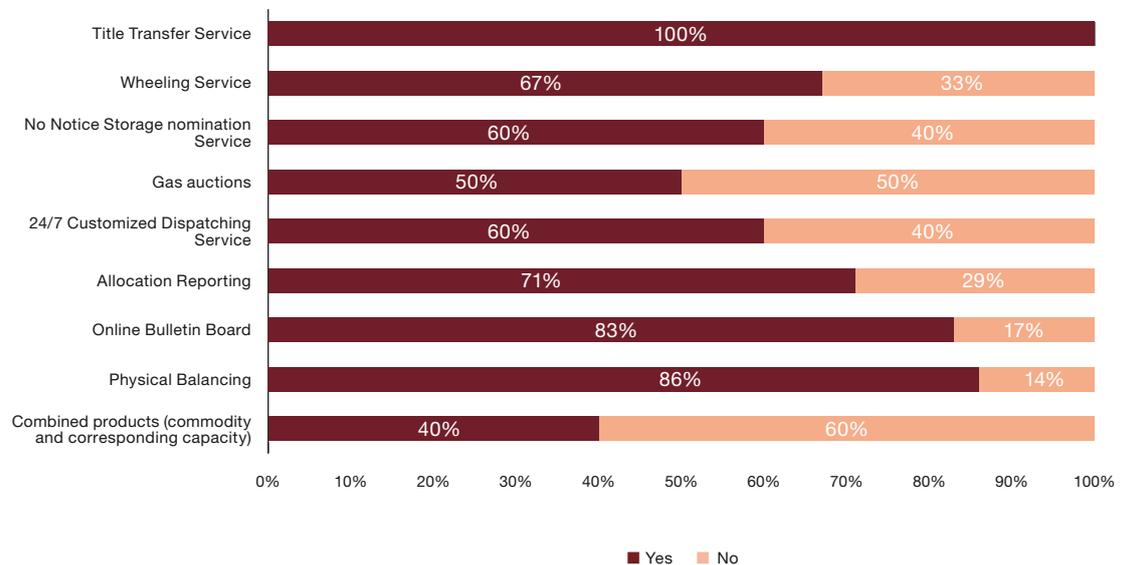
### Hub-Services at CEGH trading locations

This year we have asked the traders about CEGH trading locations. Concerning the satisfaction with the hub services at CEGH trading locations, all traders responded, that the quality of those could be improved.

According to traders' comments on the hub services at CEGH trading locations, room for improvement exists for back-up and back-down availability, a virtual trading point, harmonization of operational procedures also concerning the allocation procedure and nomination equals allocation. Furthermore one trader mentioned that staff at CEGH trading locations is sometimes not confident with the rules of gas trading and compared with electricity trading, gas trading at CEGH is too complicate.

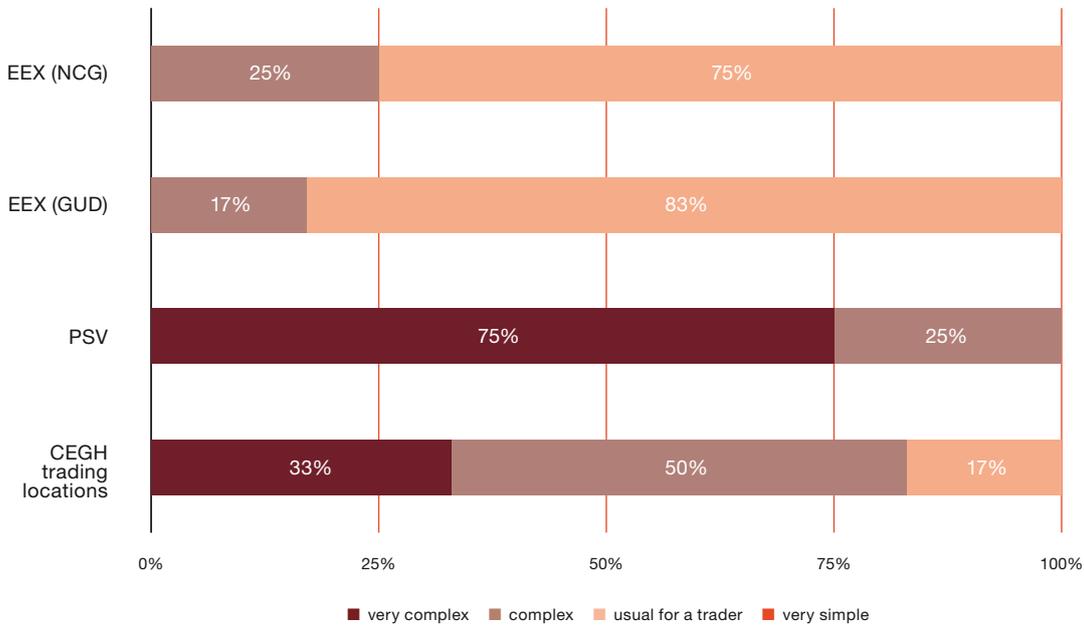
The following graph sets out which service a gas exchange should provide according to traders' view.

**Figure 18:**  
Traders' view:  
Which service  
should a gas  
exchange  
provide?



### Access rules – Trading points

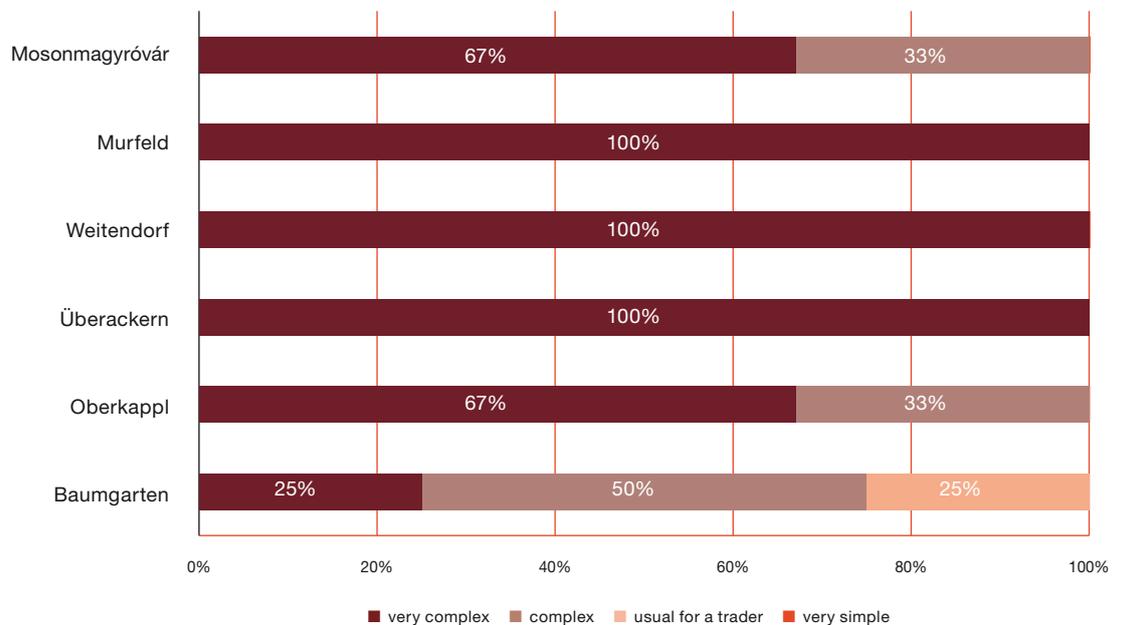
Rules of access to the CEGH physical trading locations bear considerable implications when it comes to the entry of a trader. If the impediments are too high they can also discourage traders, preventing them from taking part in trading at any given hub. We have asked the traders about their daily experience with the access rules at trading hubs but also exchanges.



**Figure 19:**  
Traders' view – Complexity of hub access rules

According to the survey results as set out in Figure 19 access rules for all hubs are seen as usual for traders at NCG (EEX) and GUD (EEX). Access rules at CEGH are perceived as complex by 33% of traders, while access rules at PSV are seen as very complex by 75% of traders surveyed. As PSV is seen as a hub for national supply in Italy, CEGH and EEX are seen as the potential regional hubs. In the result there can be seen that CEGH has to re-design the access rules more customer related.

**Figure 20:**  
Traders' view: Access rules to CEGH trading locations

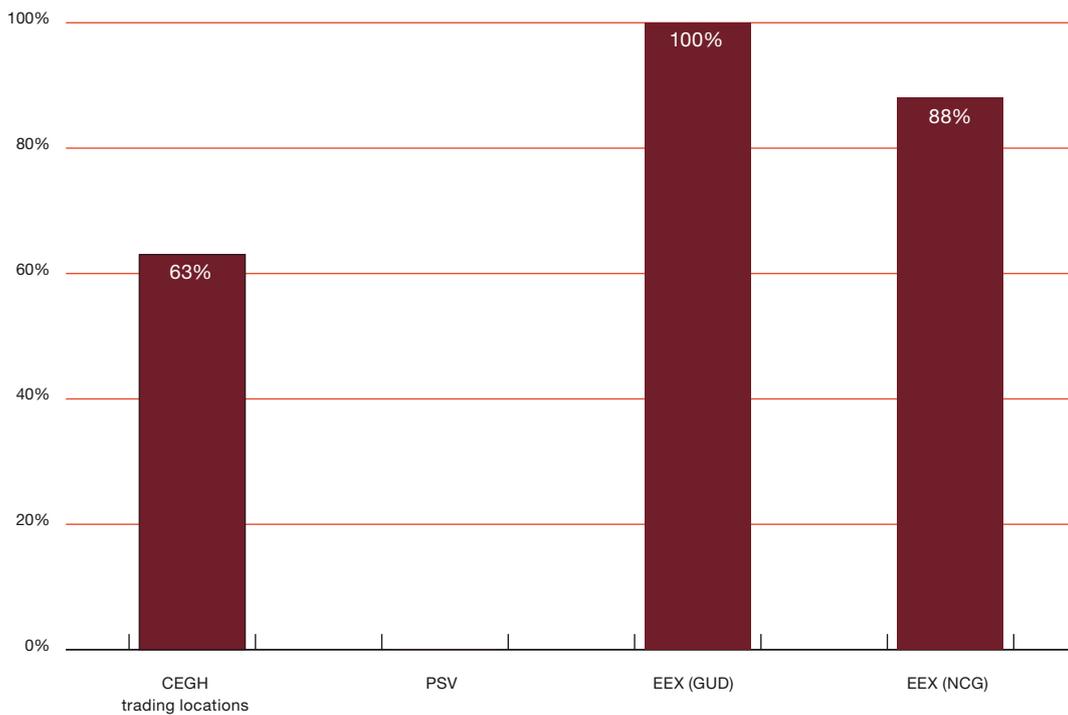


Trading locations at CEGH are perceived as very complex according to the survey results. Baumgarten represents the trading point which access rules are not perceived as much complex as those for other trading locations of CEGH, according to traders' responses. It seems that there is strong need for a harmonisation of the access rules on all CEGH trading points.

## Access to information

Information asymmetries frequently pose an important obstacle to the efficient functioning of energy markets. Incomplete data availability at trading points represents a market entry barrier.

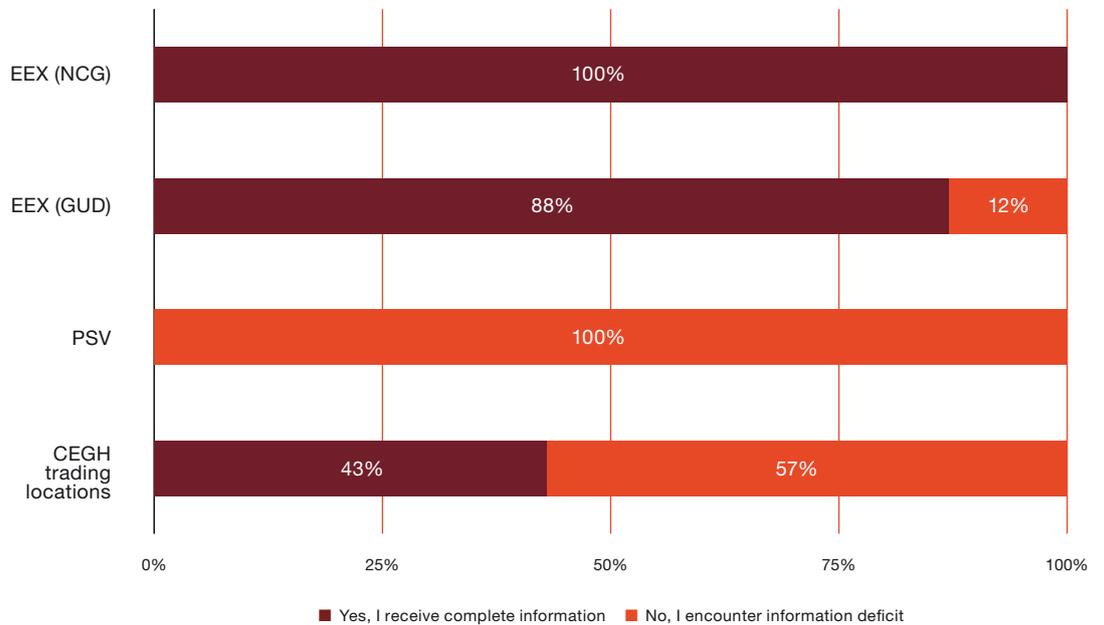
Traders' surveyed did not obtain any necessary information such as forms, rules etc. in English at PSV, while GUD (EEX) and NCG (EEX) provide all requested information in English to traders. Also CEGH shows an improvement compared to the last year.



**Figure 21:**  
Traders' view: Obtained information in English

Figure 22 shows that 100% of traders are satisfied with the way in which information is managed at NCG (EEX) followed by 88% of traders stating that complete information is delivered by NCG (EEX). On the other side, it is also evident that there is essential potential for improvement for PSV as well as considerable improvement potential for CEGH, which does not provide sufficient information to 57% of traders surveyed.

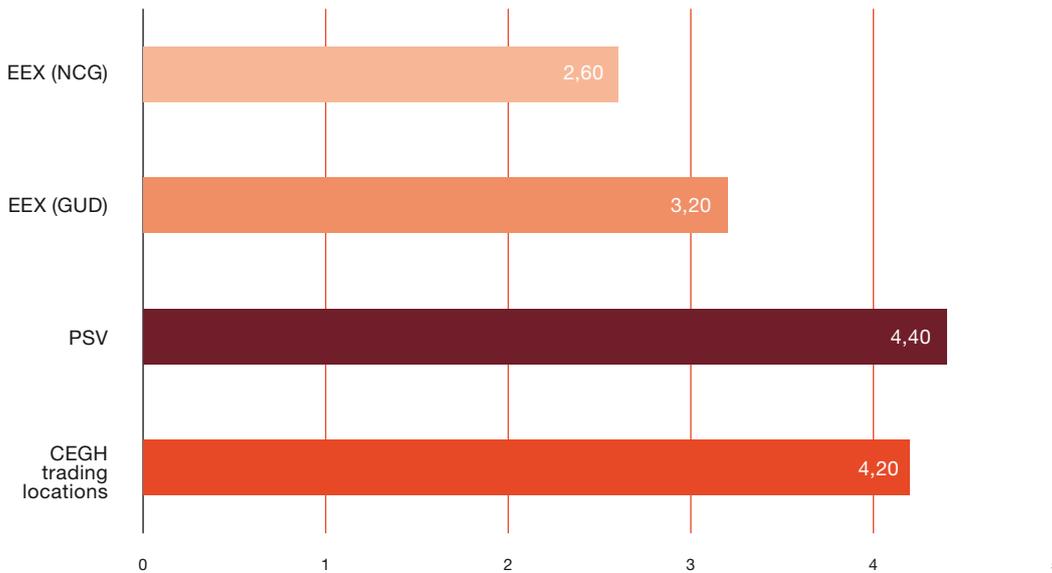
**Figure 22:**  
Traders' view: Information from the trading points



### Most important measures to be taken for improvement

Traders were asked to name the most urgent measures to be taken by each trading point in order to improve trading activity.

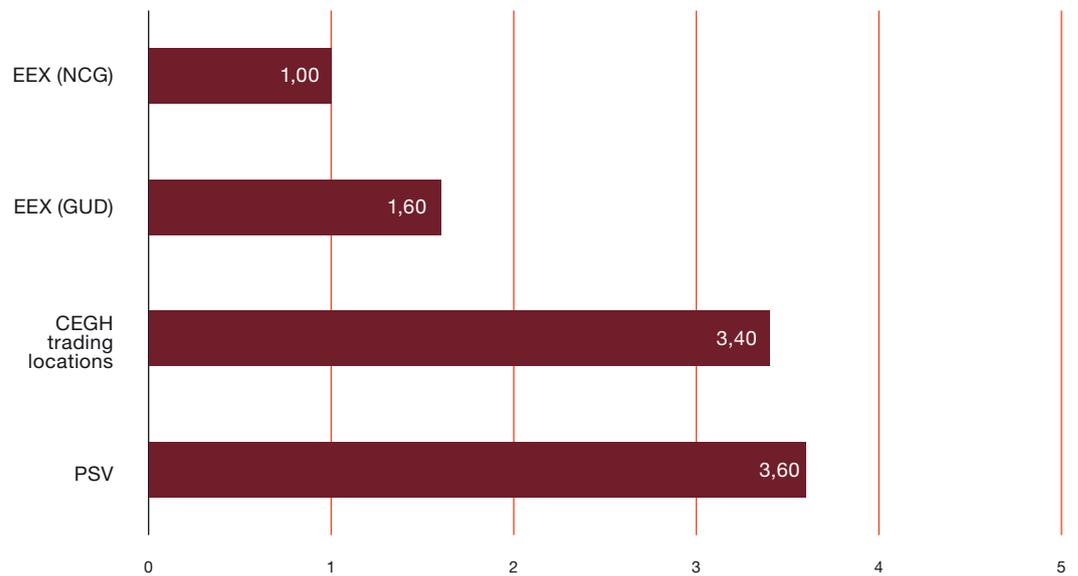
With regard to liquidity (i.e. higher trading volumes), PSV and CEGH trading locations have the greatest potential for taking measures on this topic; however traders expect more liquidity also for NCG (EEX) and GUD (EEX) virtual trading points.



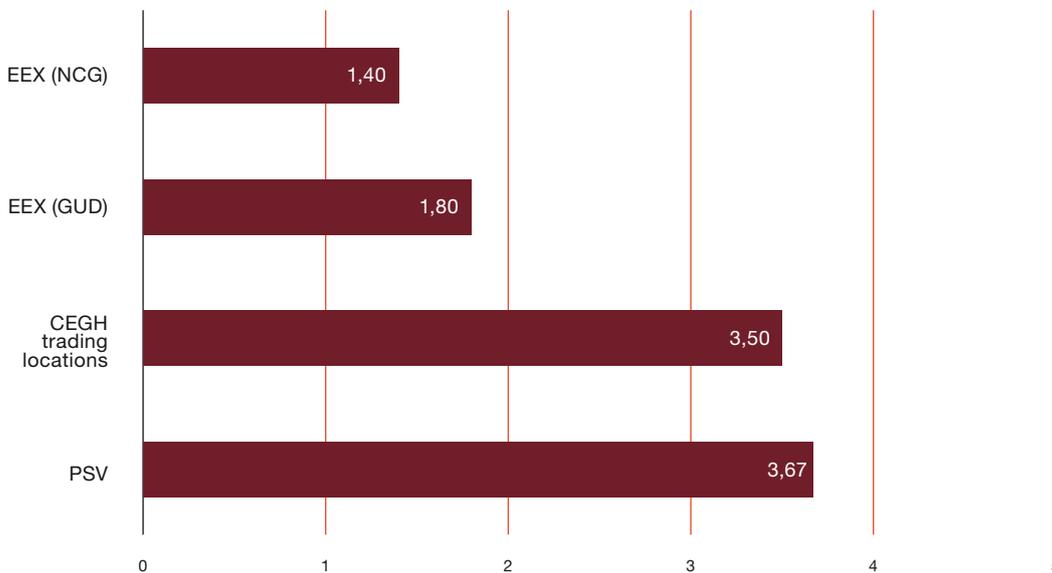
**Figure 23:**  
Traders' view: Hubs ranked for more liquidity (i.e. higher trading volumes) where 5 is numbering the most urgent hub

Another considerable prerequisite for traders throughout the entire region is the transparency of publication of price quotations. Traders were asked for their opinion which hub experiences the greatest potential for further improvement in the future.

**Figure 24:**  
Traders' view: Hub ranking - degree of urgency for transparency of publication of price quotations where '5' represents the greatest degree of urgency



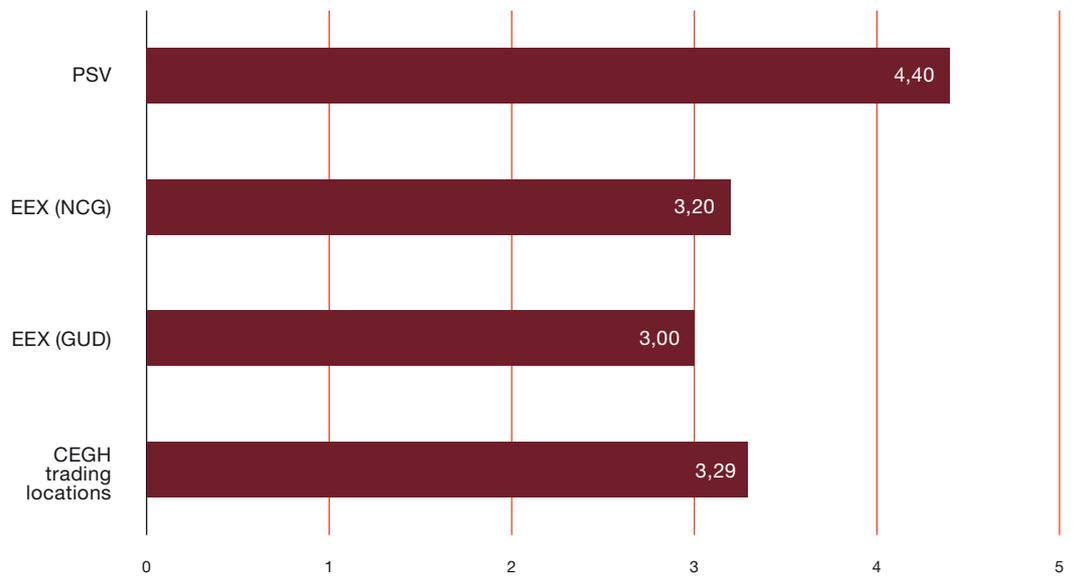
Beside sufficient liquidity and transparency of publication of price quotations, traders surveyed also expect the exchange hubs in the region to extend the product mix (e.g. intra-day) offered. Traders responded that the hub having the highest improvement potential for extending its product mix is PSV followed by CEGH trading locations. NCG (EEX) offers the best products mix in the traders' surveyed perception followed by GUD (EEX).



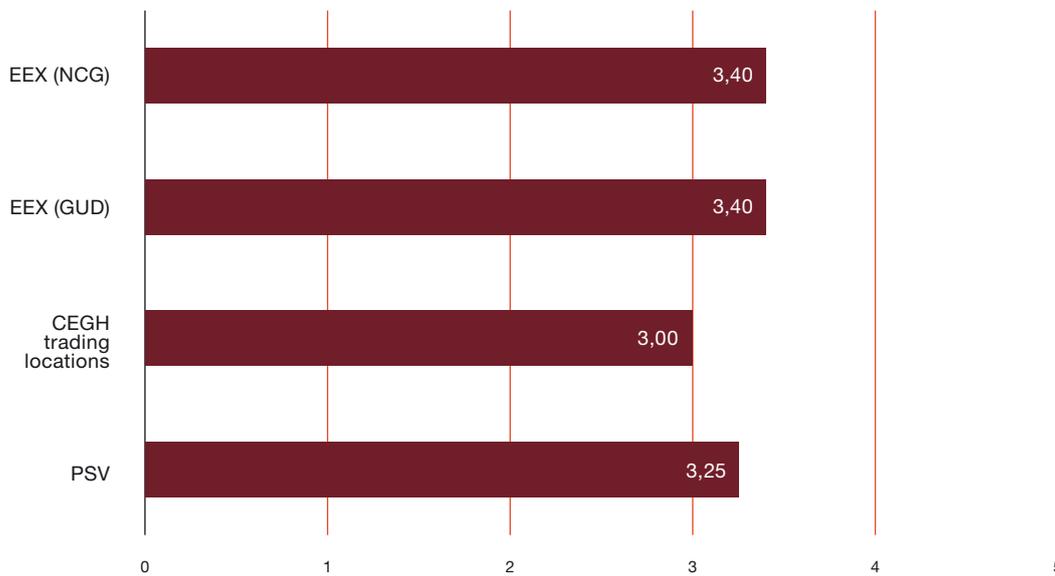
**Figure 25:**  
Traders' view: Hub ranking according to degree of urgency to take measures in order to extend the product mix where '5' represents the hub in most urgent need

Balance energy trade for the regional market is also important for traders especially with regard to a regional balance energy market. Traders perceive PSV as the hub with the most urgent improvement potential, however all hubs and trading points are claimed to provide extended balance energy trading for a regional balance energy market. Traders' commented that middle improvement potential regarding balance energy trade for the regional market for Broker NCG exists.

**Figure 26:**  
Traders' view: Hubs ranked according to degree of urgency for balance energy trading for a regional balance energy market where '5' represents the hub in most urgent need



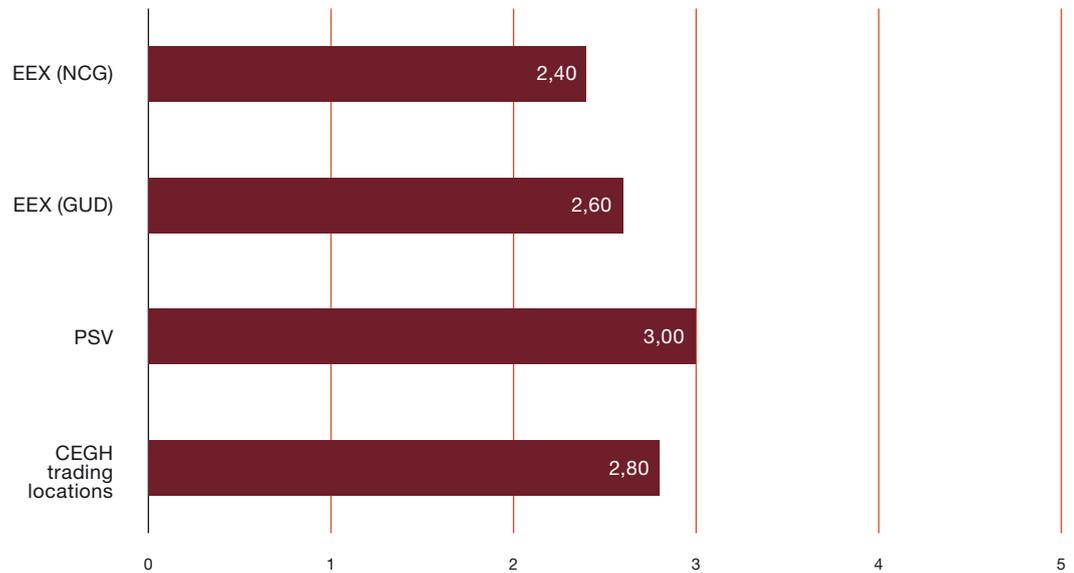
Concerning a reduction of cost of participation in the trade, the urgency for taking measures for all hubs is on nearly the same level. Compared with hubs and the exchange, traders confirmed that CEGH trading locations have the lowest level of urgency according to survey results.



**Figure 27:**  
Traders' view: Hubs ranked according to degree of urgency for reduction of trading costs where '5' represents the hub in most urgent need

Traders rank the increase of the size of the physical market as measure with less important urgency to improve for all trading points, as shown in Figure 28.

**Figure 28:**  
**Traders' view: Hubs ranked according to degree of urgency for an increase of the size of the physical market where '5' represents the hub in most urgent need**

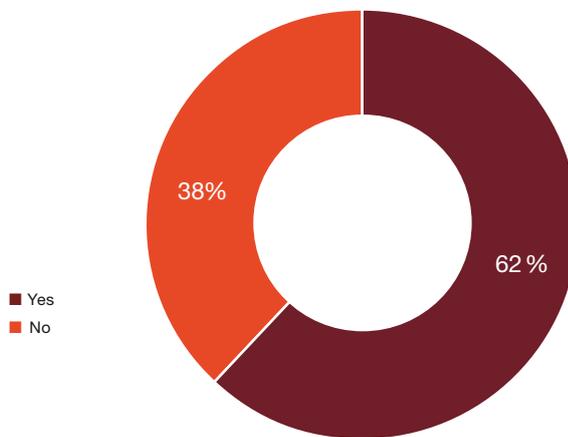


As demonstrated in Figure 1 for each trading point, a high number of traders stating that urgent measures needed to be taken reached a relatively high average. As a consequence of these statements, the implementation of just one specific measure would not be sufficient. Many traders claimed that implementing all proposed measures would result in huge improvement potential for all trading platforms.

Traders' comment on specific measures for PSV which is required to improve the transparency and accessibility of the hub as well as reform balancing regime is required. Furthermore trader want to see a declaration of gas origin, at PSV and OBA for the Italian-Austrian border (allocated = nominated). At CEGH trading locations have urgency for measures to be taken with regard to back up back down.

## Ownership Structure

According to 62% of the traders' surveyed, the ownership structure of a hub is influencing its functioning. Taking into account that CEGH is one the leading hubs in the region the ownership structure at CEGH has to be discuss this issue for their further development.

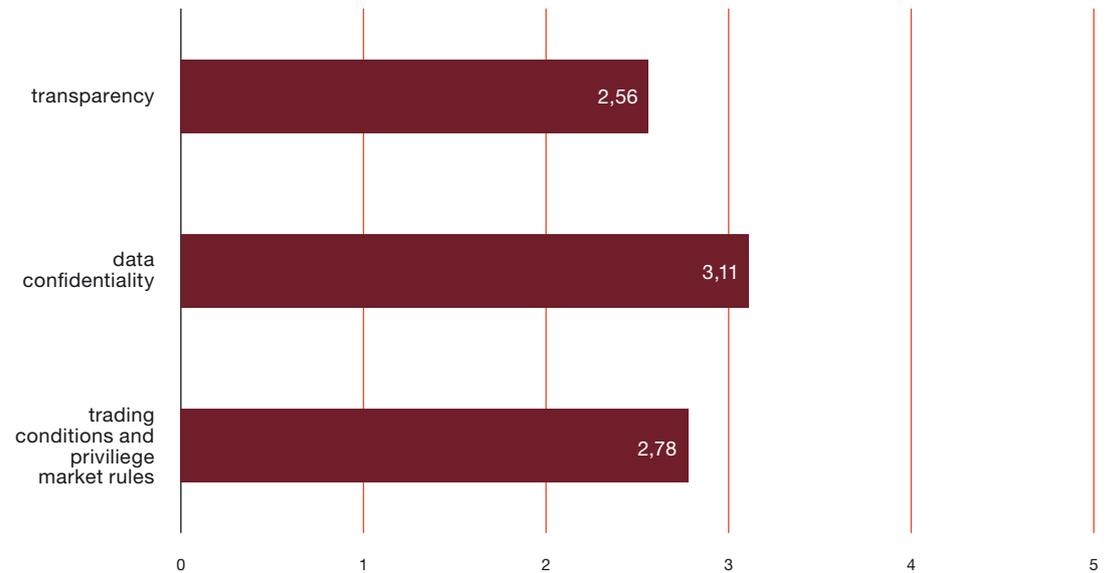


**Figure 29:**  
Traders' view: Influence of the ownership structure of a hub to its functioning

If the majority of shareholding of gas hubs/exchanges is owned by one or few active market participants the highest influence according to traders' responses would be on data confidentiality.

As outlined in the comments received, problems concerning suspiciousness regarding privileged market information will always exist, when a trading hub is operated by a major player. In traders' opinion, hub owners should be as independent as possible. A possible ideal situation would be characterized by the fact that the owner is the TSO, which is supposed to be independent and which is regulated. A suggested alternative was that a multiple shareholder structure, which represents all players involved, should be aimed for.

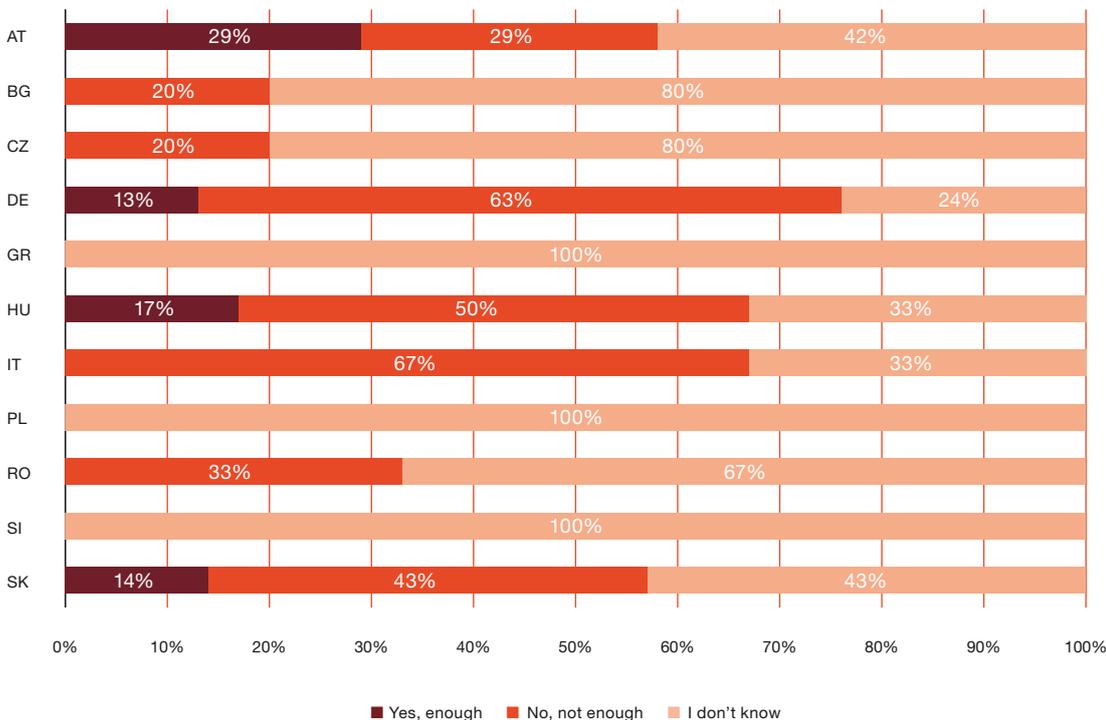
**Figure 30:**  
Traders' view: Impact of majority of shareholding of exchange owned by one or few market participants on key factors, when "5" represents extensive influence



## Gas storage

PricewaterhouseCoopers asked traders to which gas storage facility of included trading hubs in the survey, they already have access to. 100% of traders confirmed to have access to gas storage facilities in Germany, followed by Austria, Hungary and Italy with 75% of traders having access to gas storage facilities.

Figure 31 below highlights the fact that throughout the South South East Region in total 60% of traders' surveyed are not aware whether there is sufficient contractual gas storage capacity in the market. Moreover, many traders are of the opinion that in Slovakia, Romania, Italy, Hungary, Germany, Czech Republic, Bulgaria and Austria not enough adequate contractual storage facilities are available. In total only 8% of traders answered that enough contractual gas storage facilities exist in the region. Concerning this result the SSOs have to make their storage information systems more public.



**Figure 31:**  
Traders' view: Availability of contractual storage capacity

At the same time 67% of respondents were of the opinion that the acquired gas storage capacities were “sometimes” not used. Non-usage of acquired storage capacity means that important storage system functions such as balancing energy provisions, levelling production over periods of fluctuating demand or reducing price volatility in the market cannot be met. Therefore the non-usage of acquired storage capacity is in itself an impediment to efficient and competitive gas trading in the national and regional markets.

### **Physical storage capacity**

Physical capacity is the capacity which in technical terms is the maximum storage capacity (injectability, deliverability and space) that the SSO can offer to storage users, excluding storage capacity for SSOs operational needs.

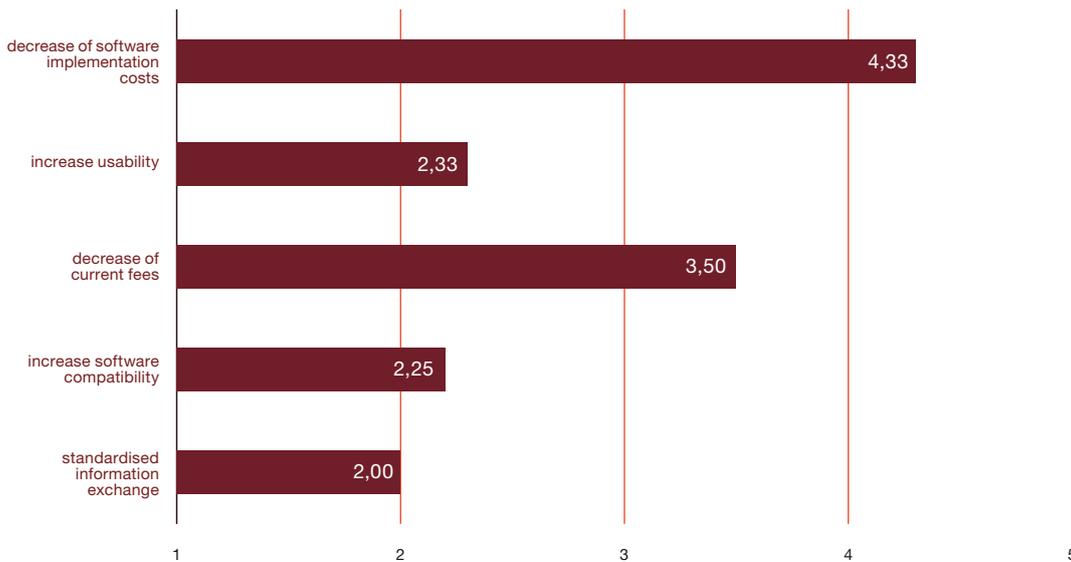
Strategic storage could ensure security of the gas supply in countries with a high percentage of imports such as Austria (approx. 80%). The storage of natural gas reduces the risk of interruption in service in the course of delivery, as exemplified by the Ukrainian and Russian conflict in the winter months of 2008/2009. Strategic storage means the maintaining of mandatory stocks within the national storage market. Regulation discrepancies among ERGEG members usually reflect the different available storage capacities. An example is Italy where stockpiling of gas is obligatory.

Among the traders’ surveyed, 89% do not consider strategic storage to be an obligation for traders. Moreover, 100% of traders stated that this concept should be implemented for the entire regional market and not only for certain national markets.

## IT systems

IT systems are a key success factor with regard to effective energy exchange system management. Lack of proper functioning and not synchronized IT standards results in the gas trade being blocked, leading ultimately to market failure.

Figure 32 sets out that decrease of software implementation costs is the most important element to work on considering the improvement potential of IT systems of exchange hubs in the region. Furthermore, traders believe that a decrease of current fees also has high improvement potential.



**Figure 32:**  
Traders' view – Improvement potential for IT system where '5' is numbering the highest potential

## Standardised systems (billing, nomination)

Standardised billing systems for trading balancing energy and the nomination of orders accelerate trading procedures. The ability to work in an environment of smoothly running trading procedures is a key success factor for traders.

100% of survey respondents would welcome the introduction of a standardised billing system for the entire regional energy market. Likewise, all traders surveyed would welcome the introduction of a standardised nomination system in the region.

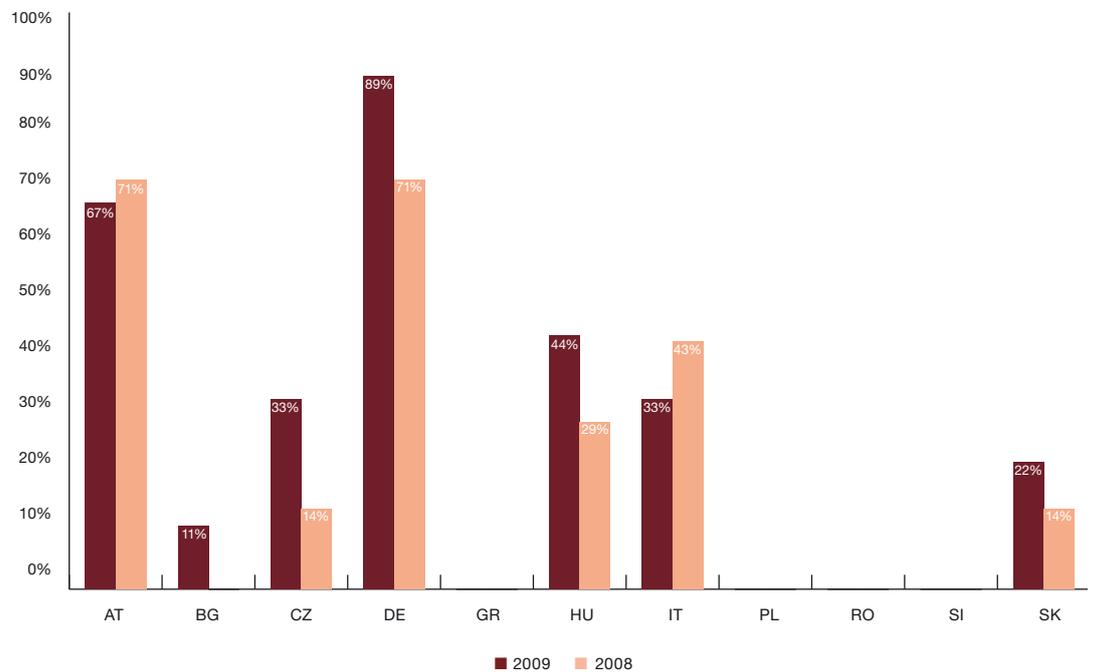
### Comparison 2008-2009

This comparison shall show the main developments between the trader survey from 2008 and 2009.

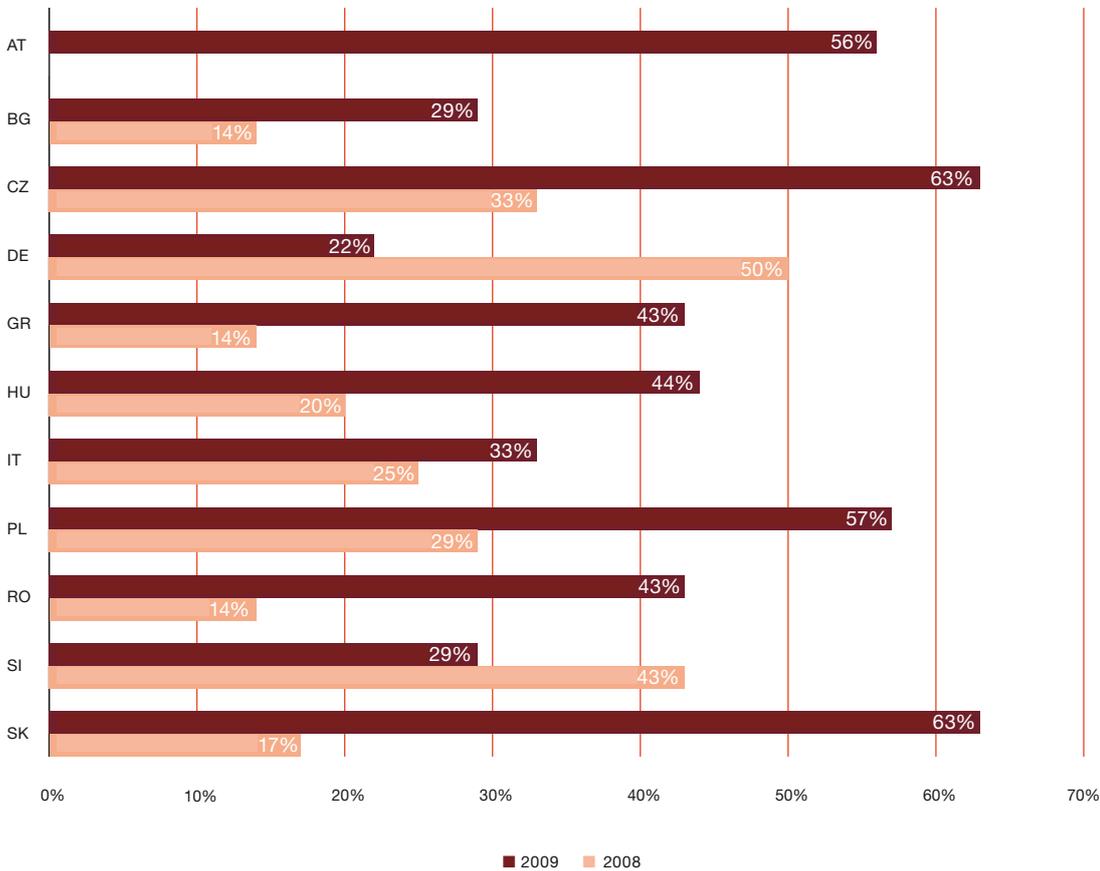
### Trader's interest in emerging markets

An increased number of traders are actively trading in emerging markets, represented by growing numbers of traders in Hungary, Czech Republic and Slovakia. The highest growth of active traders in a market can be documented in Czech Republic from 14% of active traders in 2008 to 33% in 2009, representing a growth of 19%, as well as new market entries of traders in Bulgaria, which is set out in Figure 33. This could be a result of the improvements of the last years of certain markets but also the entire market opening of each national market.

**Figure 33:**  
Comparison of markets, where traders are active (traders who have responded)



In traders' community view, the interest of non-active traders for new markets has grown within the last year. The focus of non-active traders for entering the market when market conditions were approved, has grown for all countries in the region except Slovenia, which experiences a decrease of interest for market entries from 43% to 29% in 2009



**Figure 34:**  
Traders' view: Interest of non-active traders to trade, if market conditions were approved

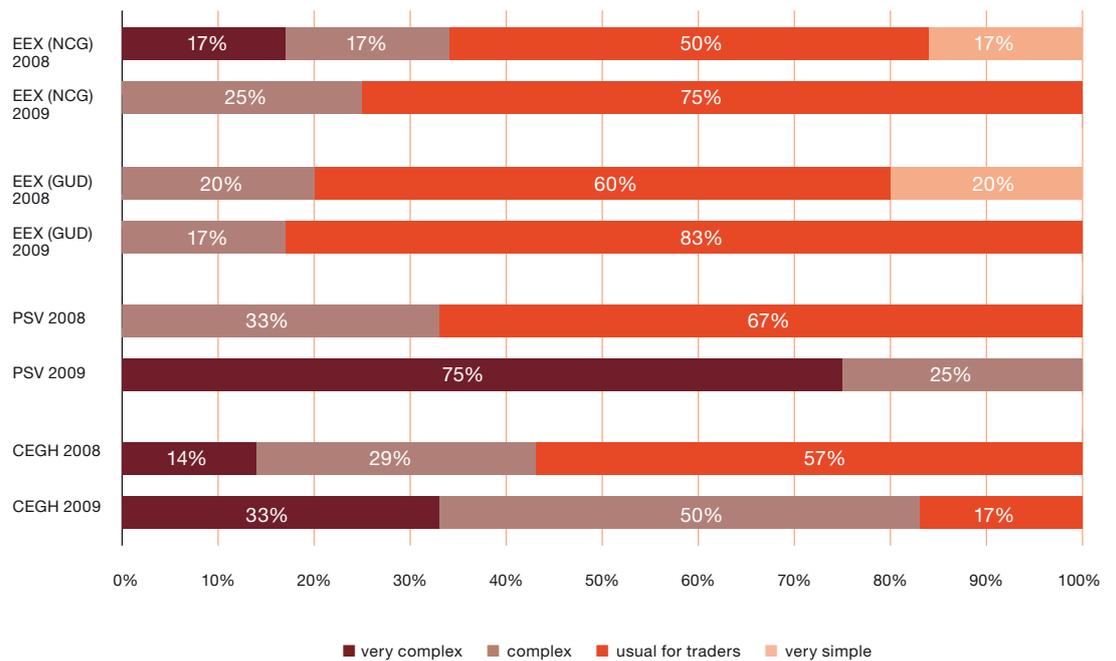
### Complexity of hub access rules is growing

Compared to the last year the traders experience is that the access rules to Germans virtual trading points is still usual for the traders. 75% stated this year that the rules are usual.

A different picture is given at the trading hubs. Rules at PSV are now for 75% very complex, in the last year the rules were more or less usual for the traders.

CEGH had already last year complex rules for the traders and increased this year to a total rate of 83% of very complex or complex rules. The share of traders which find the rules usual decreased from 57% to 17%.

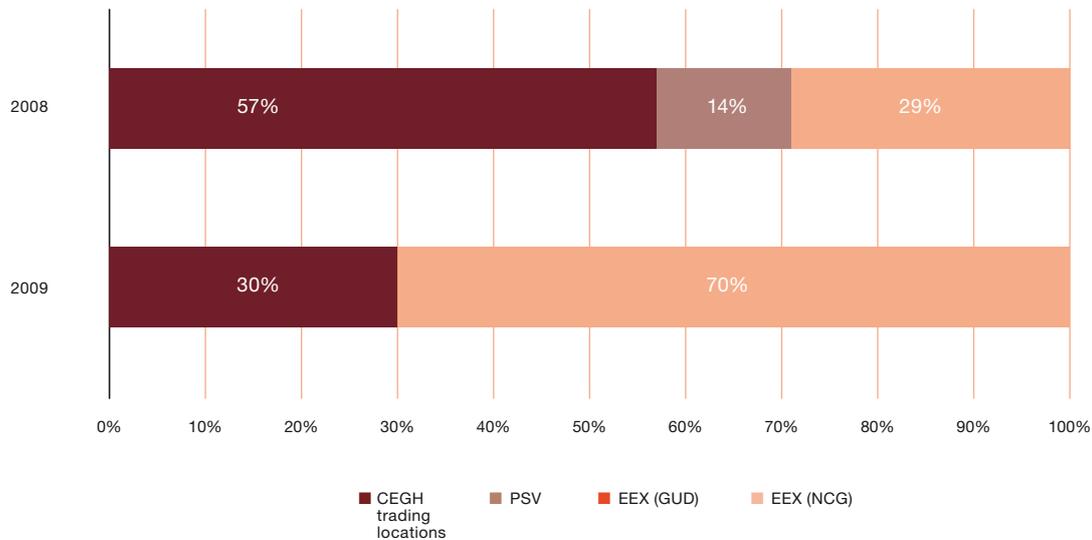
**Figure 35:**  
Traders' view: Complexity of hub access and exchange access rules



### Importance of trading platforms

According to the survey results of 2008, 57% of traders surveyed said that CEGH has the best chance to develop to the most important trading platform in SSE. Figure 36 highlights that traders' view has changed, 70% of the respondents think that NCG (EEX) now will be realized as leading exchange hub compared to 30% being convinced for CEGH being the best option to develop to the most important hub in SSE.

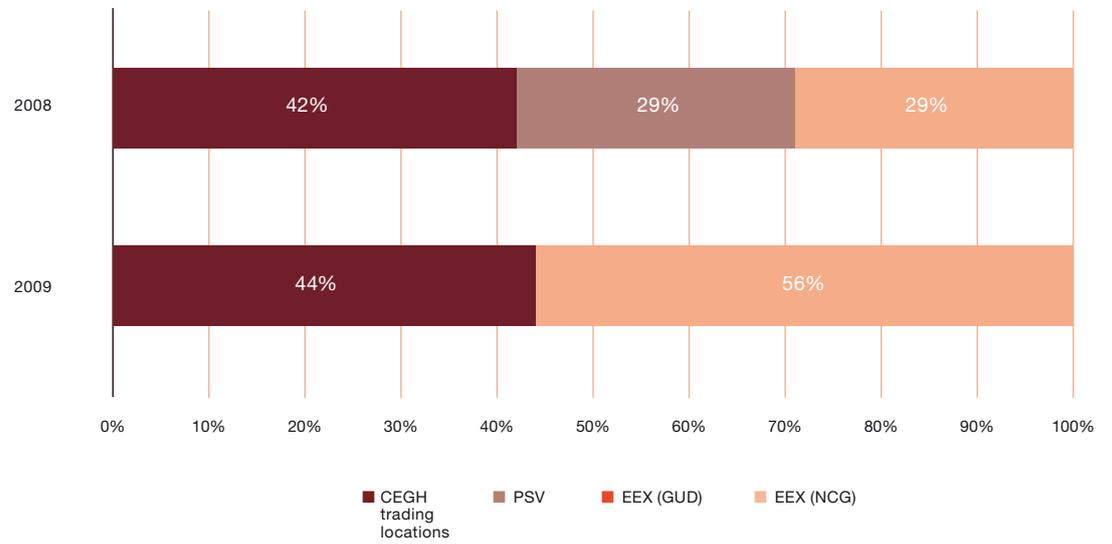
CEGH is on the way from a hub to a Gas Exchange but some traders have lost the confidence in the development. They need the trading place now and the announced start of the gas exchange was postponed several times. Compared with the more complex rules of CEGH, traders see now EEX in the pole position.



**Figure 36:**  
Traders' view: Best chance to develop to the most important trading point in SSE region

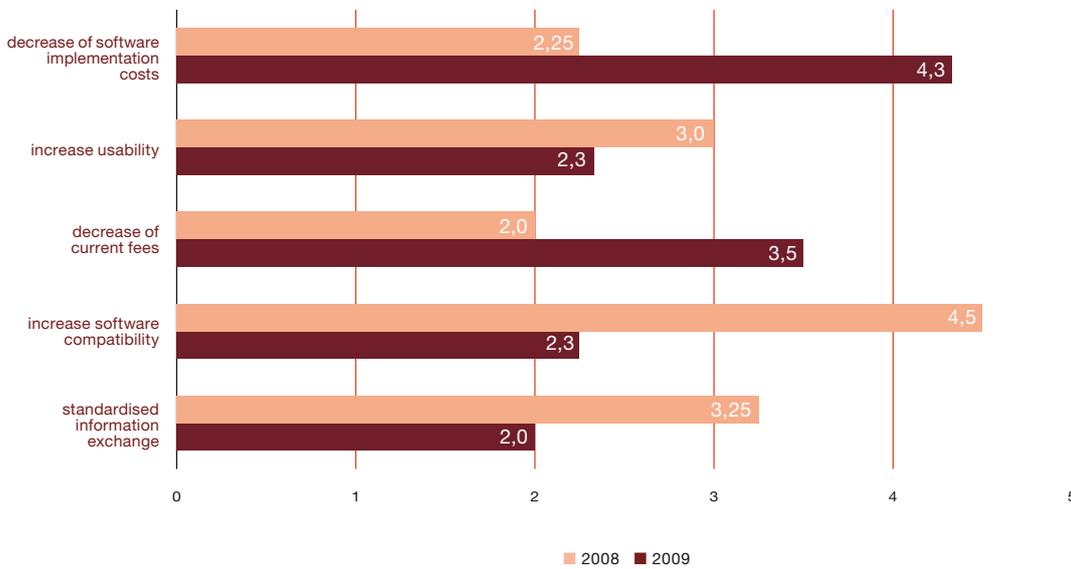
But, 44% of traders still see CEGH as the best suited hub for a regional trading platform. Here we can see the CEGH is suited very well as a hub but CEGH has also realized that the physical location of an Exchange is independent from the trading location (virtual hub).

**Figure 37:**  
**Traders' view in 2009: Which hub/exchange would be best suited as regional trading platform?**



## Improvement potential for IT systems

When investigating the results for improvement potential of IT systems, Figure 38 below shows that – comparing 2008 and 2009 results – improvement potential for a decrease of software implementation costs has grown. However, increased software compatibility – an important element to work on in 2008 – has experienced improvement and therefore is not considered as most important factor to be upgraded.



**Figure 38:**  
Comparison of Improvement potential for IT-Systems 2009

The “Impediments to Gas Trading in South and South Eastern Europe” survey was prepared by PricewaterhouseCoopers (PwC). The information and data presented in the survey is based on the work results of two task forces:

- Research undertaken by energy experts from PwC between September and October 2009.
- Survey based on a standardised questionnaire and conducted among 24 gas trading companies. The participating gas traders had to be active as non-residents in at least one of the markets of the South South East Region.
- 54% of traders selected responded to the survey.
- Methodology of weighting questions concerning attractiveness of certain measures: Each country was weighted by the number of valid marked entries.
- We asked the respondents to answer the questions only in respect to countries which are international markets to them. For example, if the core business and head office was in Austria, then they would skip the Austrian market in the evaluation.

The survey covered the following topics:

- Trader activity
- Transportation
- Balancing energy
- Trading platforms
- Gas storage
- IT systems

## Acknowledgements

PricewaterhouseCoopers would like to thank all participants who took time to complete the survey. We would also like to thank EFET and ERGEG representatives (Gas Regional Initiative – South South East Region) for showing their cooperation in drawing up the criteria and in establishing contact with the various targeted respondents.

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