ACER
Agency for the Cooperation of Energy Regulators

European Gas Target Model – review and update

Annex 4

Stakeholder requirements on gas forward markets: Results from the 2014 market inquiry

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1 Executive summary

Replies to ACER's questionnaire on the functioning of forward gas wholesale markets in Europe circulated in spring 2014 revealed some interesting information on the current status of traded gas forward markets as well as on stakeholders' requirements on these markets (details are reported below).

However, since the number of replies was rather limited and also since there was quite a variance in stakeholder's answers, no ultimate conclusions as regards current status assessments and future requirements on gas forward markets could be drawn from this round of information collection. It is planned to repeat the exercise from time to time in the future.

2 Introduction

In spring 2014 ACER circulated a questionnaire among respondents on the functioning of forward gas wholesale markets in Europe. The questionnaire's objective was mainly to generate information, that could be used as input into a monitoring system, on the current functioning of gas forward markets as well as on requirements of stakeholders on future market functioning.

The questionnaire's target group comprised gas suppliers for small and/or large end users, large end users (who carry out their own trading activities), operators of gas fired power stations, importers / wholesalers, traders (paper traders and traders with assets) and producers.

The questionnaire was distributed across Europe using various mailing lists (e.g. from ACER, EFET, Eurogas and the Florence School of Regulation). Respondents replied in written form to ACER, and had the option of remaining anonymous.

Section 3 of this annex provides the evaluation of the replies to this questionnaire and is structured as follows:

1. Replies to the questionnaire
2. Respondents description
3. Respondents' procurement and trading activities
4. Respondents' needs with respect to traded gas forward markets
5. Respondents' assessment of gas forward market functioning
6. Respondents' opinion on market features, suggested measures and market design

The questionnaire itself is presented in the appendix (section 4).

3 Evaluation of respondents' replies'

3.1 Response rate to the questionnaire

There was a limited response to the questionnaire. In total, 31 replies to the questionnaire were received, and 14 of these had to be excluded from further analyses. Replies were excluded, for instance, if the replier's role was not in line with the questionnaire's scope (e.g. where private persons replied) or if they were empty.

The remaining 17 replies were used for the analysis. The respective respondents' background is quite varied as regards their business roles and geographical location of sales and trading markets.

Nearly half of the 17 replies were not sent anonymously.

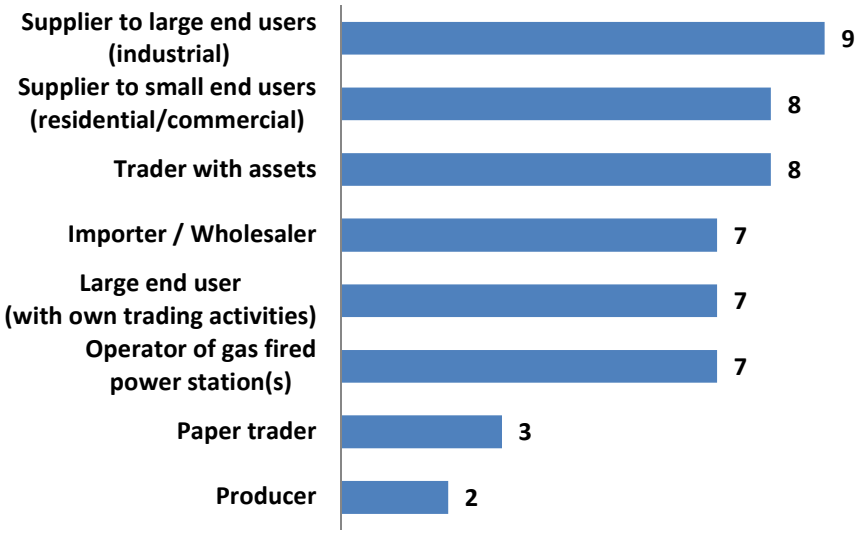
3.2 Description of respondents

This section describes the respondents' business roles and their geographic background of sales and trading markets.

Business roles

On average the respondents assume three of the business roles foreseen in the questionnaire. The following graph shows how often each business role is assumed by a respondent.

Figure 1 Business roles of respondents



Sales and trading markets

Respondents' sales (where they sell to end users and local retailers) and trading (where they trade with other wholesale respondents) markets are diverse and cover a wide range of European markets. In total, respondents are active in 18 different sales markets and 16 different trading markets (no. of

replies: 16 and 17) with a certain focus on northwest Europe (including UK) as well as Spain and Italy (see Figure 2 and Figure 3). On average respondents are simultaneously active in four sale markets and seven trading markets.

Figure 2 Sales markets of respondents

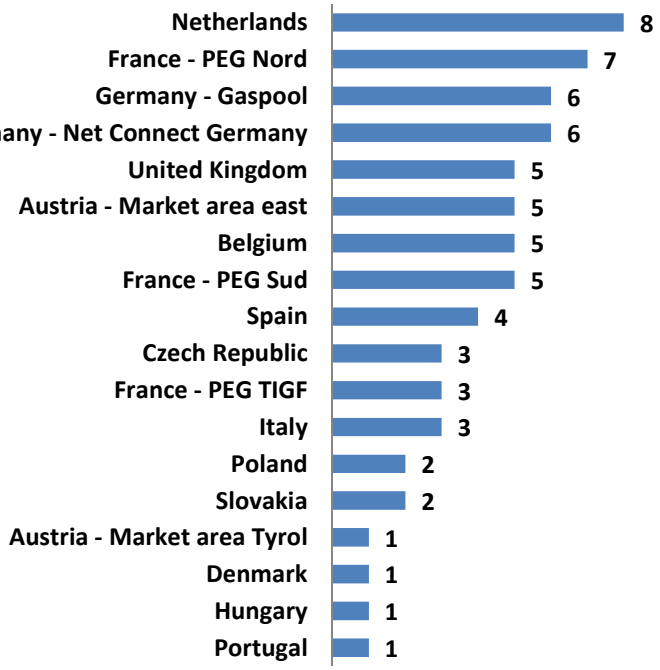
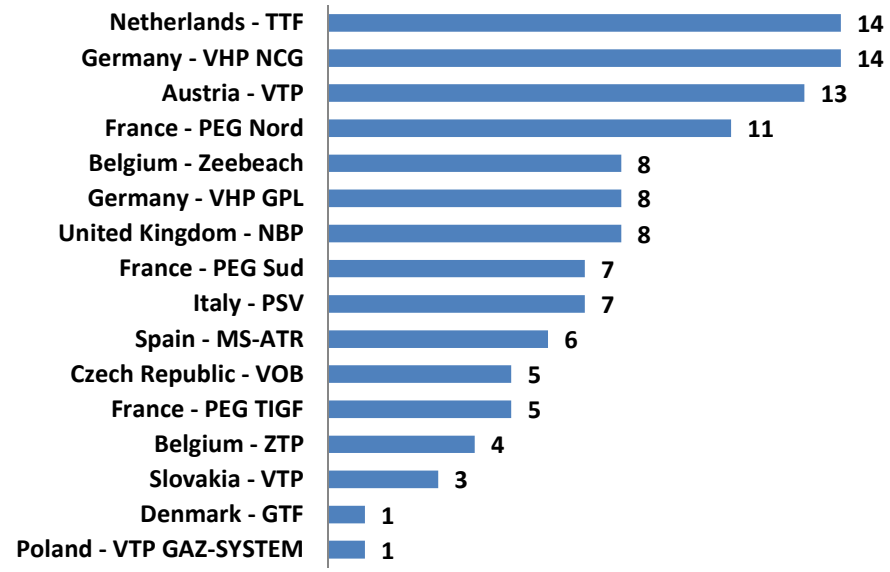


Figure 3 Trading markets of respondents



Respondents' ranking of the importance of their sales and trading markets is shown in Figure 4. Stakeholders were asked to perform this ranking on the basis of their sales and trading volumes in the respective markets (no. of replies: 16).

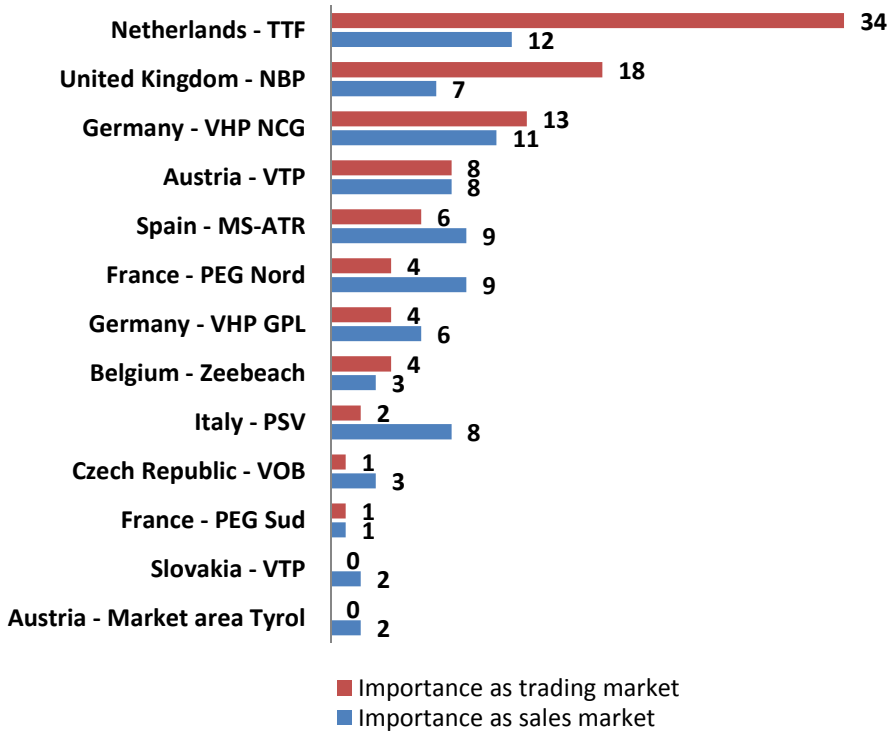
Respondent's most important trading market is the Dutch TTF, which is also their most important sales market, although by a narrower margin over the second-place sales market.

Following TTF, the respondents' next most important trading markets are the British NBP and the German NCG, however with significantly lower scores. Also the Austrian and Spanish markets show relatively high scores – well ahead of Belgium Zeebeach and German Gaspool.

Regarding the most important sales markets, the Netherlands rank highest, closely followed by German NCG, Spain, French PEG Nord, Austria and Italy. The United Kingdom is named much less frequently as an important sales market than it is named as an important trading market.

Figure 4 Importance of trading and sales markets for respondents

(Scoring system: 3 points for most important market, 2 points for second most important market, 1 points for third most important market)



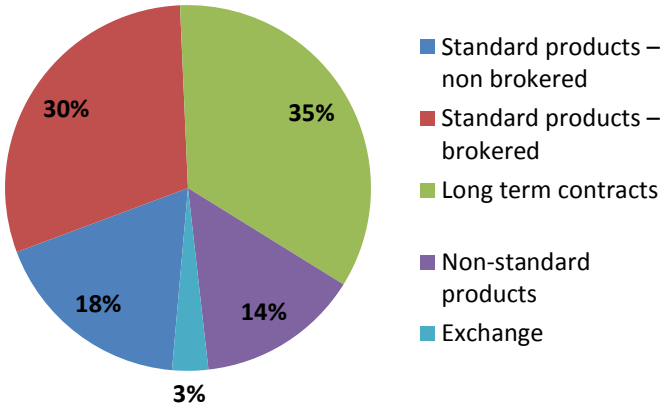
3.3 Procurement and trading activities of respondents

This section addresses respondents' procured products, their OTC trading partner network and cross-market trading activities.

Procurement split by product type

Figure 5 provides respondents average procurement split by product types (no. of replies: 11). On average respondents procure more than half of their gas by means of standard products. Brokered standard products represent the largest share of this – 30% of the total gas procured – compared with non-brokered bilaterally traded standard products, which account for 18%. Procurement via exchanges is nearly negligible for respondents, with a share of only 3% of total procurement. Procurement on the basis of long-term contracts still plays an important role for respondents, 35% of their gas is procured via LTCs. 14% of the total gas procurement is via other bilaterally traded non-standard products.

Figure 5 Respondents' average procurement split by product type



However, the procurement behaviour varies considerably. For example a couple of respondents report procurement of up to 90% of their volumes via long term contracts (and correspondingly low standard products shares), others reported that they procured 100% of their volumes over brokered standard products and exchange.

OTC trading partner network

Respondents' number of OTC trading partners for brokered and non-brokered standard products is on average well above the level which is considered optimal by respondents (no. of replies: 15). Respondents have on average 40 different OTC trading partners per hub (the lowest figure was 3, and the highest 85), while they consider on average the number of 20 trading partners per hub to be an optimal minimum number for OTC-trading (lowest 4, highest 50). 3 out of the 15 respondents that answered this question state that they have fewer trading partners than they consider to be the optimal minimum.

62% of respondents state that their trading volumes are rather asymmetrically distributed across their trading partners, while 38% report a trading volume distribution which is quite uniform.

Cross border trading activities

The majority of respondents (88%) use location spread products in gas (no. of replies: 17). When asked about the reason for this, hedging (in more liquid markets) is the most frequently reply (by 41%). Other reasons are speculation (24%) and logistics (18%).

82% of respondents report that they engage in hedging activities in markets other than the market(s) they sell gas in. On average, respondents are active in three markets for trading reasons only – these are markets where they do not sell gas to end users. Respondents' respective motivations for this are mainly the illiquid trading environment at the respective sales markets (29%) and contractual price indexations to other markets (24%).

The most important markets in which 7 out of 17 respondents trade gas without also selling to end users are the Netherlands, German NCG and Austrian market area east.

3.4 Respondents' requirements on traded gas forward markets

The questionnaire asked market participants about their requirements regarding deal frequencies, order book volumes and trading horizons on traded gas forward markets. This section provides the respective evaluations.

Deal frequency

Market participants were asked how many deals for a specific gas forward product (e.g. a specific quarter or season on a specific gas market) need to be concluded on a single trading day so that they would consider the price signal generated on the basis of these deals to be trustworthy. 14 respondents answered this question, 2 of which are considered outliers[1].

The median required deal frequency on the forward market stated in the responses is 15 deals per product, gas market and trading-day. Half of the replies lie between 10 and 20 deals per day, minimum and maximum values are 2 and 45 deals per day respectively.

Order book volumes

Market participants were asked how much gas (in MW) they would like to see offered and/or bid for a specific product at a specific market at a given point in time so that you would consider the market

[1] Outliers: 0.01 and 1000 deals per day.

as 'liquid' at that point in time. 10 respondents answered this question, 2 of which are considered outliers[2].

The median order book volume which is required to be simultaneously available is 120 MW on both the offer and the bid side.

Trading and liquid order book horizon

When asked how far into the future market participants would like to be able to buy or sell gas standard products in a market environment that can (still) be considered liquid, 16 respondents provided an answer. The median trading and liquid order book horizon required is 36 months, and 11 out of the 16 replies are in the range between 24 and 36 months.

Note that this question does not imply that trading in this period should be possible on the basis of monthly forward products, but only that delivery under the 'longest' forward product (e.g. CAL, season, quarter) should reach this far into the future.

The reasons given for the required trading and liquid order book horizon are mainly to do with risk management and sales requirements:

- "Customers often ask to fix prices further out and we need to hedge the exposure".
- "This is the period under which upstream supplies and downstream sales typically need to be managed risk-wise. Storage and capacity management requires a pricing signal (for capacity booking decisions) covering such periods as well."
- "The indicated 60 month liquidity is necessary and/or useful for hedging purposes, in relation to physical activities, contracts or assets."
- "Gas consumption is planned over a longer time period (especially when compared to power products). Such planning requires the liquidity of the products."

Preferred lot size

When asked about their preferred lot size (minimum order quantity), respondents distinguish between 'short-term' and 'long-term' products in their replies, however, no respective definitions were provided. For the long-term products the preferred lot size is about 5 MW, while for short-term products it is about 10 MW (no. of replies: 13).

Respondents justified their answers mainly by referring to issues of hedging, market access and practicability:

- "10 MW is easier for hedging small clients or small amounts in the future"

[2] Outliers: 5,000 and 2,000,000 deals per day.

- This (10 MW) is preferred because of "the attractiveness for smaller players, hence increasing transparency and liquidity".
- 5 MW are "low enough to allow speculative activity – especially for longer periods such as calendar products which result in higher volumes per lot"
- 30 MW: With small lot sizes traders have to hit through many bids or offers to get to the real lot size they wish to trade.
- "Probably need to have higher minimum order quantity for shorter term products (30MW) monthly as small lot size creates increased pressure on systems/increase risk of errors"

3.5 Assessment of forward market functioning by respondents

This section provides respondents' assessment of forward market functioning regarding access to OTC trading partners, seller concentration and overall functioning.

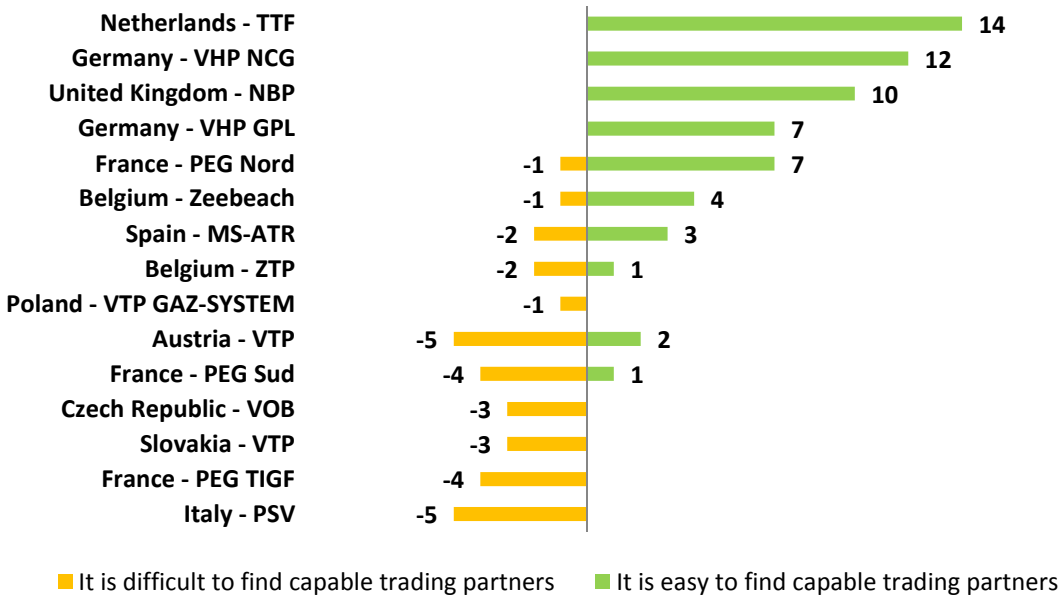
Access to OTC trading partners

A required basis for trading standard products bilaterally (directly or via brokers) is setting up an OTC trading partner network. Respondents' assessment of the ease and difficulty of finding capable trading partners for various European gas markets is presented in Figure 6.

The clear advantage that the largest North-West European markets have is apparent when it comes to setting up an OTC trading network. According to respondents it is more difficult to find capable trading partners in other parts of Europe (no. of replies: 14 and 16).

Figure 6 Respondents' assessment of the ease and difficulty of finding capable trading partners

The figure shows the number of replies stating that it is difficult / easy to find capable trading partners for the respective market.

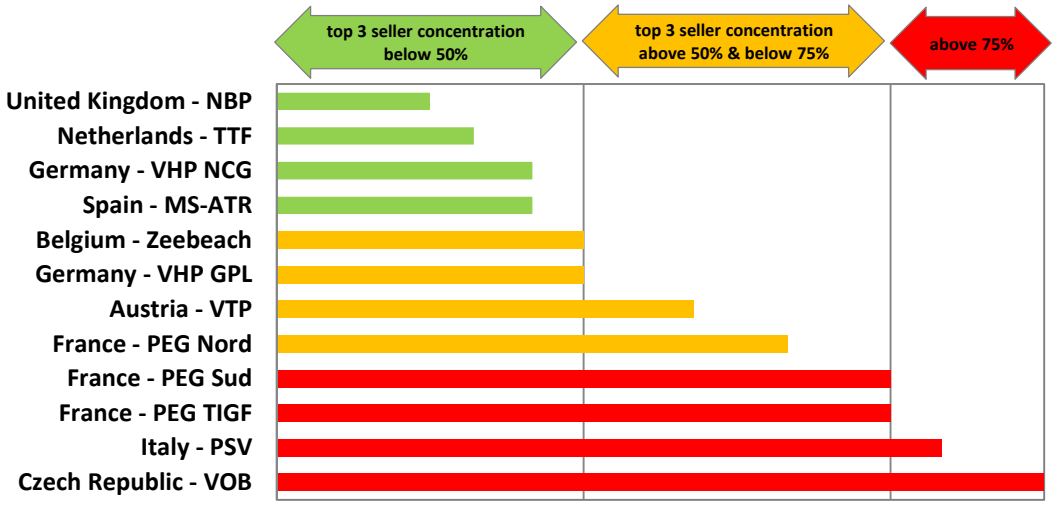


Seller concentration

Market participants were also asked to assess seller concentration on European gas markets, classifying the trading volume concentrated on the top three sellers using the following categories: top three seller volume: below 50% / between 50 and 75% / above 75%.

Figure 7 illustrates the results of this assessment: low market concentration on NBP, TTF, NCG and in Spain, high and extreme market concentrations on the other European gas markets (no. of replies: 10).

Figure 7 Respondents' assessment of seller concentration



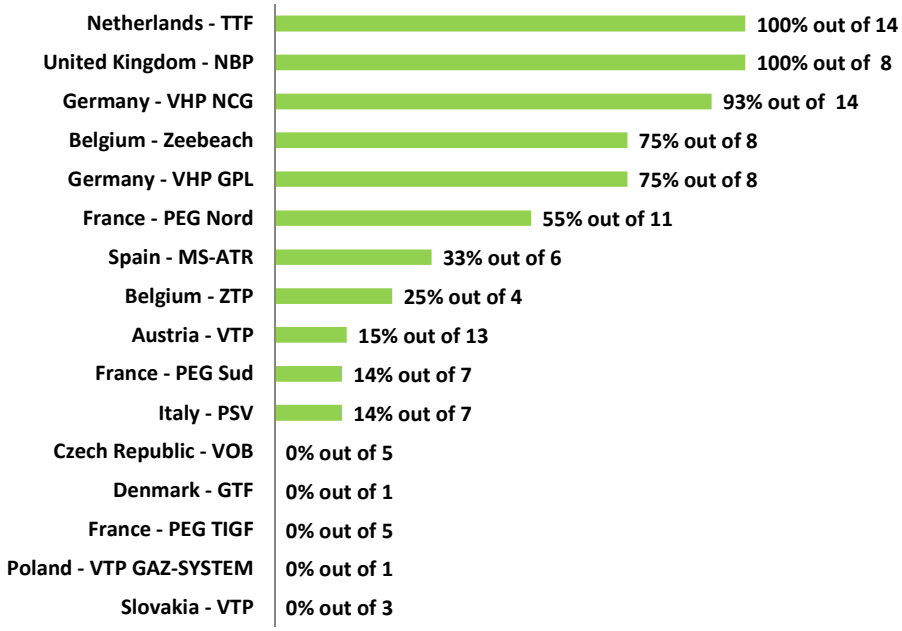
Functioning of forward markets

The questionnaire asked market participants to name those gas markets where

- they can currently execute forward deals,
- for the gas standard products they regularly require,
- at a price that they consider fair on all trading days which are relevant to their business.

Figure 8 shows the share of respondents trading on the respective gas market that state that the above conditions are fulfilled (no. of replies: 17). According to respondents TTF, NBP and NCG again lead in this category, followed by Zeebeach and Gaspool.

Figure 8 Share of respondents trading at the respective gas market and stating that they can currently (a) execute forward deals, (b) for the gas standard products they regularly require, (c) at a price they consider fair, (d) on all trading days which are relevant to their business.



3.6 Respondents' opinion on market features and market design

In this section respondents' comments on important structural features of traded gas markets as well as their suggested measures for improvement are presented. Furthermore, respondents' preferred market design from a European perspective is presented.

Important market features

The questionnaire asked respondents to describe elements of wholesale market trading which are essential or valuable for their business. The answers included:

- Regulatory stability and transparency of regulatory process
- Ease of access to/from hubs
- Many, diverse players active on the market: diverse counterparties (traders, suppliers, funds, banks) also from abroad, brokers and exchanges (Trayport enabled)
- Low market concentration
- Good hub services (ease of nominations, allocation rules, operational support)
- Low transaction costs
- Numerous gas sources (indexed to the hub price)
- Firm deliveries on hubs
- 24/7 exchange market

Suggested measures for improvement

To make traded markets fulfil 'all their business requirements' respondents suggest the following improvements:

- "… it is crucial for the obligations contained in the Third Package, and in particular the EU Network Codes, to be implemented in a consistent and timely manner"
- "the rules for entering in a country only for trading should be easier to understand and equal for all countries"
- "Introduction of a market operator/organised market"
- "Reduction of fees"
- "Exemption of all hubs from VAT, it's a real limitation for the development of business, and creates fraud risk"
- "Reducing the role of incumbent suppliers by means of gas release programmes and imposing meaningful market making obligations mandating suppliers to offer forward products at the hub at a reasonable price."
- "Increase interconnectivity to increase competiveness"
- Making hubs fully virtualised and hub deliveries 'super-firm', especially elimination of force majeure clauses

Respondents' preferred market design

The questionnaire asked market participants which of the following alternative setups for European traded gas markets they would prefer for the future:

Option 1: "There is a liquid traded spot and forward gas market in every market area where you supply gas to end users (or use gas for your own purposes)."

Option 2: "There is only a liquid traded spot gas market in every market area where you supply gas to end users (or use it yourself) plus, additionally, there are one or two or three liquid traded forward gas markets in Europe (e.g. NBP and TTF and …) which concentrate forward trading from all over Europe."

It is important to highlight that the question asked about the goal which should be pursued, not about the means of achieving it. In their responses 35% of the 17 respondents prefer option 2, giving the following justifications for their choice:

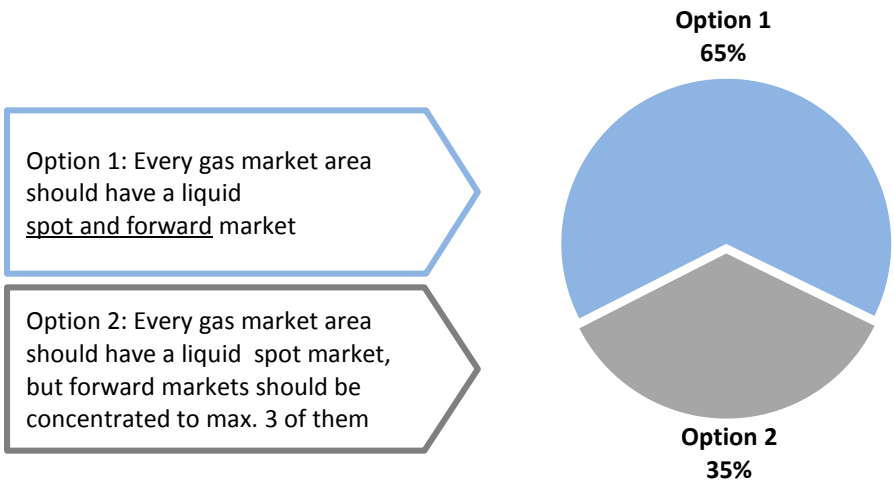
- "If too many hubs have to be promoted, liquidity in each hub individually will inevitably suffer, costs will rise, transparency will diminish"
- "Bigger markets mean higher competition"

- "Avoids over-fragmentation of liquidity"

The majority of respondents (65%, 11 out of 17) however prefer option 1, giving the following justifications for their choice:

- "This makes hedging much easier"
- "It is much easier to manage spot and forward on the same market. Plus not all the traders have access to big markets such as TTF and NBP."
- "Spreads between [the two markets] can change, so the margin required for doing an operation will be higher than if you can link to the xx market" (domestic market of respondent deleted by author)

Figure 9 Share of respondents preferring the respective market design options



4 Appendix: Questionnaire

ACER's questionnaire on the functioning of forward gas wholesale markets in Europe from spring 2014:

1. What is the current role of your company/organisation in the European gas business value chain?
2. In which European markets did you sell gas to end users (or use it yourself) in 2013?
3. Of the gas sales markets you have chosen under question 2 above: What are the three most important ones for you? Please provide a ranking based on volume (sales or own use) in 2013.
4. On which hubs do you actively participate in the traded forward gas market (i.e. you buy and/or sell gas with delivery on that hub)?
5. Of the gas hubs you have chosen under question 4 above: What are the three most important ones for you? Please provide a ranking based on trading volume in the forward market (buy&sell) in 2013.
6. Please provide a percentage split of your total gas procurement in Europe in 2013 to the following categories:
   - Bilateral:
     - Standard products – non brokered
     - Standard products – brokered
     - Long term contracts
     - Non-standard products
     - Other (pls. specify)
   - Exchange.
7. Please provide the following information on the current structure of your OTC (Over-the-Counter) trading partners (for brokered and non-brokered trading of gas standard products):
   a. How many such OTC trading partners do you have on average on the three most important hubs for you?
   b. What would be an optimal minimum number of such trading partners per hub?
   c. For which hubs (that are of relevance for you) is it particularly easy to find capable trading partners?
   d. For which hubs (that are of relevance for you) is it particularly difficult to find capable trading partners?
   e. Is the distribution of trading volume to your trading partners typically quite even or rather asymmetric (i.e. with a heavy focus on only a few of your trading partners)?
8. On which of the following gas hubs can you currently execute forward deals
   - for the gas standard products you regularly require
   - at a price that you consider fair
   - on all trading days which are relevant to your business?

   Please specify only for hubs actively traded by you.

9. What would have to happen institutionally to ensure that the European gas hub being most important for your business becomes functioning in the sense as defined above (i.e. so that you can execute required deals at a fair price on all relevant trading days)?

   Note: 'Institutionally' includes (in a wider sense) the structural, technical, regulatory, legal, etc. setup relevant for the hub.
10. How many deals for a specific gas forward product (e.g. a specific quarter or season for a specific hub) need to be concluded on a single trading day so that you would consider the price signal generated on the basis of these deals as trustworthy?
11. Note: Please answer the following question only, if you have access to and experience with the order book on the electronic platforms you use for trading (otherwise please leave open). How much gas (in MW) would you like to see offered for selling and/or buying for a specific product on a specific hub at a given point in time so that you would consider the market being 'liquid' at that point in time?
12. How far into the future would you like to be able to buy or sell gas standard products (i.e. at fixed prices) on the hubs relevant to your business in a market environment that can (still) be considered liquid?
13. For which of the following gas hubs do you think that the current concentration of trading volume in gas standard products (brokered, non-brokered, exchange) to the top three (3) sellers is
    - below 50%
    - between 50% and 75%
    - above 75%?

    (Please specify only for hubs actively traded by you.)

14. Which of the following alternative setups for European traded gas markets would you prefer for the future?

    1. Option 1: There is a liquid traded spot and forward gas market in every market area where you supply gas to end users (or use gas for your own purposes).

    or alternatively

    2. Option 2: There is only a liquid traded spot gas market in every market area where you supply gas to end users (or use it yourself) plus, additionally, there are one or two or three liquid traded forward gas markets in Europe (e.g. NBP and TTF and …) which concentrate forward trading from all over Europe.

15. Do you currently use location spread products in gas? If so, for which purposes?
16. Do you engage in hedging activities in markets other than the markets you sell gas in? If so – why?
17. Thinking of the hub that is most relevant to your business – what are the main existing features of (trading on) this hub that are so essential and/or valuable for your business so that you would suggest other European gas hubs should adopt them too?

18. Background for the following question: It takes a certain effort for a gas trader to participate on a day to day basis for a specific hub in trading on electronic platforms (e.g. broker platforms or exchanges). For this question we define 'trading' as the more or less constant placing of limit orders for (selected) gas products on the chosen hub (this activity is sometimes also called 'liquidity providing'). Questions against this background:
    - What is the minimum total (market) volume you would like to see traded on a hub in any year (total over all participants) so that you would consider taking part in trading (as defined above) on that hub?
    - What is the minimum trading volume on a (one) hub that you would want to realize yourself per year so that you would consider taking part in trading (as defined above) on that hub?
19. What is the minimum order quantity (lot size) you would prefer on traded forward gas markets?

20. In addition to all aspects already addressed in this questionnaire – do you see any other issues that need to be resolved in order to make the hub that is most relevant to your business a market place that fulfils all your business requirements?

Please note that question 18 was not evaluated due to the rather limited number of replies (5).