

*Minutes of Meeting*

**CAM Network Code: Auctions Workshop, 20<sup>th</sup> July, 2011**  
**ENSTOG Offices, Avenue de Cortenbergh 100, Brussels,**  
**10.30-16.00**

Avenue de Cortenbergh, 100  
B – 1000 Brussels

Tel: +32 2 894 5100  
Fax: +32 2 894 5101

[info@entsog.eu](mailto:info@entsog.eu)  
[www.entsog.eu](http://www.entsog.eu)

Name	Company/Association	Name	Company/Association
Katharina Stecker	BDEW	Heather Glass	ENTSOG
Jürgen Dengel	BNetzA	Johannes Heidelberg	ENTSOG
Brendan O’Riordan	Bord Gais Networks	Manuel Coxe	EUROPEX
Anne Marie Colbert	Bord Gais Networks	Michal Briatka	Eustream
Denis Twomey	Bord Gais Networks	Kees Bouwens	ExxonMobil/OGP
Andrew Pearce	BP Gas Marketing	Zoltán Gellényi	FGSZ Ltd
Steven Kooiman	Cefic	Laurent De Wolf	Fluxys
Helen Stack	Centrica	Cecilia Ogle	Gaslink
Tom Jesshop	ConocoPhillips	Barbara Eisenhuth	Gasunie Deutschland
Sophie Dourlens-Quaranta	CRE	Alex Barnes	Gazprom Marketing & Trading
Geert Clauwaert	CREG	Claude Mangin	GDF SUEZ
Nikos Katsis	DESFA S.A.	Daniel Bonnici	GRTgaz
Friedrich von Burchard	E.ON Ruhrgas AG	Mark Hobbelink Wiekens	GTS
Carsten Zeiger	E.ON Ruhrgas AG	Steinar Solheim	IFIEC
Kristóf Kovács	EC, DG ENER	Fernand Felzinger	IFIEC
Christian Sidak	EconGas GmbH	Matthew Hatch	National Grid
Alexander Frank	EconGas GmbH	Natasha Ranatunga	Ofgem
Nabil Mezlef	EDF	Sam Phillips	OGP
Anne-Elisabeth Moquet	EDF	Maciej Szeniaowski	OGP GAZ-SYSTEM S.A.
Sebastian Eyre	EDF Energy	Bürkman, Ulrich	ONTRAS
Laurent Gilotte	EDF R&D	Oliver Altenhoff	Open Grid Europe
Alex Barnes	EFET / Gazprom Marketing & Trading	Stelios Bikos	Public Gas Corporation (DEPA)
Maria de Vicente	Enagás	Ralf Presse	RWE Supply & Trading GmbH

Name	Company/Association	Name	Company/Association
Andreas Holzer	EnBW Trading GmbH	Paolo Di Benedetto	SRG
Christian Rutherford	Energinet.dk	Christiane Sykes	Statoil (UK) Ltd
Aleksander Trupej	Energy Agency of the Republic of Slovenia	Angelika Herzog	TAG GmbH
Jana Kalcikova	Energy Regulatory Office, Czech Republic	Henrik Schultz-Brunn	Thyssengas
Francesca Zanella	Eni Gas & Power	Maximiliano Miglio	TIGF
Valentina Garruto	eni S.p.A.	Kai Aldenhoff	WINGAS GmbH & Co. KG
Frank Roessler	ENTSOG		

## 1. Introduction

ENTSOG noted that there was significant interest in the Auction simulation Workshop and expressed its appreciation to stakeholders for their participation. ENTSOG advised that the aim of the Workshop was to enable participants to gain an understanding of the auction design proposed in ENTSOG's draft CAM Network Code, its advantages and potential disadvantages through an interactive session to improve the current auction design.

ENTSOG advised that whilst the draft CAM Network Code proposes two auction algorithms for the different standard products, due to time constraints, the session would only simulate a simplified version of an auction for long term (4 quarters) capacity over 2 unidirectional Interconnection Points. Following an explanation of the auction principles outlined in the draft CAM Network Code and a demonstration of a worked example, the Participants were split into 8 groups, each acting as one bidder with pre-prepared Business Scenarios.

## 2. The Business Scenarios

### *Shipper 1 – base load shipper (importer)*

- Buys mostly gas at production field in network A and sells to local distributors in network C
- Aim to purchase 50,000 units of capacity at each IP and each quarter (flat profile across the year)
- Fixed budget of €1.2 million per annum

### Results:

Day 1: Participants wished to send a clear signal to the market as to the capacity they required in the hope that the other Shippers would be honest about their aggregate demand. They bid for 50,000 units in each quarter at the reserve price (i.e. P0) leaving them a balance of €50,000 of their budget.

**Day 2:** Following the publication of the interim allocation results, they noted that the aggregate demand for each quarter was very high. They decided to send a further clear signal to the market that they required 50,000 units at each IP per quarter. Once again, they bid for this capacity at the reserve price.

**Day 3:** They followed a more aggressive bidding strategy in this round in order to secure the required capacity.

**Result:** They were allocated 50,000 units in 2 quarters and exceeded required capacity in another quarter where they had hoped to be allocated the required amount pursuant to pro-rata allocation. They were not allocated any capacity in 4 quarters. They were also below budget.

**Comments:** There is a need to implement mechanisms to prevent “swinging behaviour” as this does not reflect real market behaviour. There should only be a single round auction but without rules to discipline users to already place valid bids at the beginning 10 days are considered as too much since they may rather choose not to reveal the bidding strategy.

*Shipper 2 – base load shipper (importer) - 2*

- Buys mostly gas at production field in network A and sells to local distributors in network B
- Aim to purchase 50,000 units of capacity at IP A-B in each quarter (flat profile across the year)
- Fixed budget for the whole year.

Results:

**Day 1:** Participants noted that other Shippers were not honest with their bids and that this resulted in nonsensical results following Day 1.

**Day 2:** Participants tried to analyse other parties strategies based on the interim results which suggested that all the IP’s at each quarter were congested.

**Day 3:** Participants tried to establish a bidding pattern which proved futile and placed their bid in the hope of allocation based on pro-rata at the highest price step.

**Result:** They secured their required capacity in the first quarter and in the second quarter they only achieved 50% of the required capacity. However, they were also below budget.

Comments: There is a need to develop stability measures to ensure there are clear market signals. The proposal with one round in 10 days doesn't give clear price formation information. Further, pro-rata should be avoided, since the game showed that there is a lot of strategic bidding behaviour involved that could lead to wrong allocation of capacity. Group asked for multi-round.

*Shipper 3 – peak load shipper*

- Buys mostly gas at production field in network A and sells to local distributors in network C
- Aim to purchase 100,000 units of capacity at each IP in quarters 1 and 4 to meet winter demand
- Fixed budget of €1.2 million per annum.

Results:

Day 1: Participants did not worry about their budget constraints and focused more on their requirement to secure capacity. They didn't want to show any price signals on the first Day so they bid for their required capacity at the highest price step (P9).

Day 2: They adjusted their bid to the reserve price on Day 2

Day 3: They bid for their capacity at P9 in Quarters 1 & 4 at each of the IPs.

Result: They were allocated capacity based on pro-rata allocation and they did not secure their required amount of capacity. In addition, they exceeded their budget.

Comments: There is no need for Days 1 & 2 as there are no clear price signals being sent to the market. They noted that the pro-rata rule encouraged strategic behaviour amongst Participants. They also pointed out that a strong secondary market would be required to correct the flaws of the primary market.

*Shipper 4 – storage user*

- In summer, buys gas at hub A and puts into storage in network B. In winter, takes gas out of storage in network B and sells at hub C.
- Aims to get at least 100,000 units of gas into storage in each of quarters 2 and 3 (summer) by buying at least 100,000 units of capacity at IP A→B. Aims to get the gas purchased in quarters 2 and 3 out of storage and over to hub C in quarter 4 (winter) by buying at least 200,000 units of capacity at IP B→C.
- Fixed budget of €1.2 million per annum.

Results:

Day 1: Participants advised that their strategy on Day 1 was to send out a signal to the market but not to “spook” it by showing too much demand. They placed bid at the reserve price where they required the capacity.

Day 2: Following the publication of the interim results from Day 1 they noted the aggressive bidding of other Shippers and also that the IP’s were very congested at the highest price steps. Accordingly, they adjusted their strategy to bid for more capacity than required in the hope that they would be pro-rated their required capacity.

Day 3: They relied on the market signals outlined in the interim results from Day 2 and took a more relaxed approach to bidding on Day 3. They reviewed their budget and bid at P7/P8.

Result: They secured their required capacity for the summer months. However, they only secured 40% of their requirement for the winter months. They were also under budget.

Comments: The Participants noted that it proved difficult to budget as it was unclear how much of the budget they spent until the publication of results following the Day. They also noted that a strong secondary market would be required to secure the shortfall of required capacity.

*Shipper 5 – trader 1*

- Buys mostly gas at hub A and sells at hub C
- Aim to get as much capacity as possible at or below a specific price, in order to take advantage of an identified spread between hubs which is assumed to remain constant throughout the year i.e. €9 per quarter at Q 1 & 4 (winter) and €4 per quarter at Q2 & 3 (summer)

Results:

Day 1: Participants did not send out a price signal to the market

Day 2: They refined their strategy and bid low for quarters.

Day 3: Following the publication of the interim results, they noted that the demand for capacity had in fact trebled in some cases. Accordingly, they then bid what they required in Day 3.

Result: They were misled by the results from Day 2 and this led them to bid too low and as a result they did not secure their required capacity.

Comments: Mechanisms need to be put in place to prevent distortions in the market

*Shipper 6 – trader 2*

- Buys mostly gas at hub A and sells at hub B
- Aim to get as much capacity as possible at or below a specific price (different from trader 1 i.e. €4 per quarter at Q1 & 4 and €2 per quarter at Q2 & 3), in order to take advantage of an identified spread between hubs which is assumed to remain constant throughout the year

Results:

Day 1: Participants advised that their strategy on Day 1 was to test the market, so they bid for 100,000 units at every quarter.

Day 2: Following the publication of the interim results from Day 1 they noted that in Quarter 3 there was the least demand and felt they were possibly bidding against one other competitor. Accordingly, their strategy on Day 2 was to attempt to “bully” their competitor out of the market by bidding at P9 for that quarter.

Day 3: They bid at P4 for their required capacity in order to make a margin.

Result: The results totally changed. They were not allocated any capacity and they didn't use any of their budget.

Comments: There was insufficient aggregate information of market behaviour/bidding strategy at the end of each day throughout the auction. The 10 day bidding window is irrelevant as there is no market signal. Unless additional rules are included, the switching up and down in volume and price is considered as gambling and then a 10 day window was not needed. They felt that perhaps the price steps were too big since a lot capacity was not allocated at all. The group identified that at certain price steps shippers stepped out of the auction process completely although they've placed significant volume bids at the price step before. The group assumed that smaller price steps would allow for smoother transitions between two price steps. Also, they felt that this did not send out a clear signal for investment purposes as there were big changes between quarters and from the interim or final results, a TSO would not know whether there was higher demand than the available capacity.

*Shipper 7 – Prime Mover scenario – The Disruptive Bidder*

- Bidding for a lot of capacity for one or two quarters at IP A/B for the first two rounds
- Suddenly dropping out in the last round trying to drive the price
- Unlimited budget

Results:

Day 1: Participants advised that the bid for all capacity available at IP A-B for quarters 1 & 4 at the maximum price step.

Day 2: Ditto.

Day 3: Participants withdrew on Day 3.

Result: Participants advised that they achieved what they set out to do i.e. they were not allocated any capacity and they did not spend any money. However, it was unclear whether the price hike was as a result of the business case or due to the other Shippers strategies.

Comments: The Participants set out a number of possible refinements to the auction process which were as follows:

1. Shippers should only be allowed to reduce capacity in subsequent days – this would prevent them from being silent in the first few bidding days. Shippers can, however, increase their price, but not capacity on subsequent days – this should ensure an honest result.
2. There should be a mechanism to allow for early closure of the auction. For example, at an uncongested point, if all bids from the first Day are honest and it is clear after this round that there isn't huge demand beyond the reserve price then the auction should close early and this is the best outcome as everyone gets the capacity they require at the lowest price. This would prevent a late bidder entering to inflate the price to then step out at the end as they run the risk of being allocated capacity that they do not want if the auction ends early.

*Shipper 8 – Prime Mover scenario*

- Bidding for a large amount of capacity for winter quarters of the IP B/C only in the last round, so as to not disclose the need for capacity as long as possible.
- Unlimited budget

Results:

Day 1: Participants did not enter any bids on Day 1

Day 2: Ditto for Day 2

Day 3: They bit for all available capacity for quarters 1 & 4 at IP A-B at the maximum price step.

Result: They were allocated capacity pro-rata. As they had no budget, this was not problematic.

Comments: The Participants agreed with the refinements suggested by the Participants of Shipper 7 Group as outlined above.

### **3. Discussion on Fundamental Issues**

#### a) Stability/Price Discovery Measures

All Participants pointed out that the information available about the behaviour from all auction participants at the end of each day was not sufficient and that there was a requirement to develop stability measures to ensure credible bids are submitted on each Day. These rules must be defined to limit or restrict the adjustment of bids, to minimise misuse behaviour during the auction and provide reliable information during the whole process.

#### b) Early closure of auctions (linked to above point)

It was suggested that there should be a mechanism in place to incentivise shipper to place bids already at the beginning of the auction. For example, the auction should close early where demand is less than the available capacity. Also, the bidding window should close early if nothing additional occurs in subsequent auctions. This creates more transparency as opposed to encouraging gaming strategies. However, it was also outlined that with such a solution the closure of auctions across the EU could not be fully synchronised and some preferences for simultaneous open and closure times were raised.

Some Participants also suggested that the 10 day bidding window seems excessive especially when the information provided each day is not reliable.

#### c) Pro-rata

i) Pro-rata at the top price step (P9) when the demand is still greater than the offer - Participants did not want the inclusion of any kind of pro-rata within the auction. The general consensus was that it encouraged exaggerated bidding in the



expectation that allocations would later be scaled back. It was suggested that the introduction of additional or infinite price steps could deal with this issue.

- ii) Pro-rata when the demand drops significantly between price steps (as suggested by CRE) – Participants were clear that pro-rata between mid-stack price steps should not be introduced in such cases. It would be difficult to define when such a drop is considered as significant and this would be an easy way around auctions if the reserve price is set very low compared to the P1 – then the drop would always be great then applying pro-rata would eliminate the auction in general.

d) Multi-round auction as opposed to single round auction

Although the majority of Participants welcomed a single round approach, comments were made that a multi-round auction would have merit especially as the current auction design requires some additional rules (described above)

e) Binding bids

Many Participants felt that in order to ensure that Shippers did not behave unfairly and to prevent unlimited modification or withdrawal of bids, all bids should be binding in nature. This would prevent gaming and Users could expect more reliable market information.

f) Incremental Capacity

It was suggested by a number of the Participants that the introduction of Incremental Capacity would solve the congestion issues at Interconnection Points and would deal with the pro-rata issue. It was also suggested that the issue of over-recovery could be alleviated by the introduction of Incremental Capacity.

#### **4. Conclusion**

Participants noted that the Auction Workshop was a success as it effectively demonstrated the proposed auction algorithm as outlined in the draft CAM Network Code and highlighted various issues for each Participant to address in their written responses. ENTSOG encouraged all Stakeholders to deliver their written responses on or before the 3<sup>rd</sup> of August, 2011 and stressed that Stakeholders should seek any clarifications on the draft CAM Network Code from ENTSOG, where required prior to that date. Measures to take will be discussed when the stakeholder responses are analysed.