

Evaluation Report
TRAC-X primary 2011/2012



Contents

1. Introduction
2. Legal Basis and Aim of the Evaluation
3. Evaluation
 - 3.1. Retrospective Summary
 - 3.2. Evaluation of Auctions on TRAC-X primary
 - 3.2.1. Annual Auctions
 - 3.2.2. Quarterly Auctions
 - 3.2.3. Monthly Auctions
 - 3.2.4. Auctions with a Surcharge
 - 3.2.5. Detailed Analysis of Day-Ahead Auctions
 - 3.3. Assessment of the Evaluation Questionnaire
4. Conclusion and Outlook

1. Introduction

TRAC-X Transport Capacity Exchange GmbH (TRAC-X) was founded in Leipzig in 2005 and operates two trading platforms for natural gas transport capacities: TRAC-X primary and TRAC-X secondary. Currently, TRAC-X has the following shareholders: bayernets GmbH, Fluxys TENP GmbH, Nowega GmbH, European Energy Exchange AG (EEX), Gastransport Nord GmbH, Gasunie Deutschland Transport Services GmbH, GRTgaz Deutschland GmbH, ONTRAS - VNG Gastransport GmbH, Open Grid Europe GmbH, Thyssengas GmbH and GASCADE Gastransport GmbH.

In 2010, the twelve German transmission system operators (TSOs)¹ commissioned TRAC-X with the task of creating and operating a platform for the awarding of primary capacities in Germany. This was done in order to fulfill the requirements set forth in § 12 Para. 1 S. 1 GasNZV (Regulations on Access to Gas Supply Networks). TRAC-X primary assumed the duties of the primary capacity platform and operation began, on schedule, on 01 August 2011.

The German TSOs market their transport capacities on TRAC-X primary in accordance with the requirements of the Regulations on Access to Gas Supply Networks (GasNZV) and the KARLA Gas resolution - "Resolution Regarding Capacity Regulation and Auction Procedures in the Gas Sector". On TRAC-X primary, firm capacities are auctioned at market area and cross-border interconnection points of the German transmission system operators. At TRAC-X primary it is possible to book capacities that are not required to be auctioned, convert capacities from interruptible to firm in auctions as well as, since 1 April 2012, to surrender firm capacities.

TRAC-X primary itself serves exclusively as a marketing platform. The entry and exit contracts concluded on TRAC-X primary are solely between the transmission system operator and the transport customers involved and are fulfilled and managed outside of and independently of TRAC-X primary. TRAC-X does not, themselves,

¹ bayernets GmbH, Fluxys TENP GmbH, Nowega GmbH, Gastransport Nord GmbH, Gasunie Deutschland Transport Services GmbH, GRTgaz Deutschland GmbH, jordgas Transport GmbH, ONTRAS - VNG Gastransport GmbH, Open Grid Europe, GmbH, terranets bw GmbH, Thyssengas GmbH and GASCADE Gastransport GmbH

offer any capacity rights and does not become a contractual partner involved in the entry or exit contracts or agreements concluded. The transmission system operator is responsible for the offerings and arrangement of the corresponding capacity products as well. TRAC-X primary merely offers central registration of all German transmission system operators, an overview of the TSOs' bookable network points, the carrying out of auctions of firm annual-, quarterly-, monthly- and daily products at market area and cross border interconnection points (MIPs and BIPs) as well as the booking of First-Committed-First-Served (FCFS) primary capacities which are not subject to mandatory auctioning requirements.

2. Legal Basis and Aim of the Evaluation

The legal basis for the evaluation report is formed by clause 5 lit. b) of the operative part of KARLA Gas. This requires transmission system operators, together with actual and potential auction participants, to regularly evaluate the auctioning procedure and report their findings to the ruling chamber at least once annually. This is to occur by 01 May each year. An agreement with the Federal Network Agency granted a deadline extension for 2011/12 requiring that the report be submitted by 01 June 2012.

The Federal Network Agency has justified the evaluation requirement in Section 4.5.5.2 of KARLA Gas by stating that there is little previous experience with capacity auctions in the gas market. The annual evaluation is to form the basis of adjustments to the auction procedure which may be necessary and it is to, in particular, make early adjustments to the auctions' structures possible. The annual evaluation should provide the market participants with a higher degree of planning security. Additionally, more regular evaluations are meant to help avoid increased transaction expenses in capacity management for both the transmission system operators and the transport customers.

The actual and potential auction participants were involved in the evaluation during the Network User Forum in Berlin on 22 February 2012. Additionally, a questionnaire was made available to the network users in the TRAC-X primary website's download area. Deadline for submission of the completed form was 20 April 2012. This

evaluation is made up of these results as well as a statistical evaluation of the auctions which have taken place since trading began, an introduction to the auction processes as well as legal aspects and an outlook for 2012. Should the evaluation of capacity auctions lead to the conclusion that adjustments to certain auction conditions are necessary, these will be made with respect to future auctions after the Federal Network Agency has been consulted.

3. Evaluation

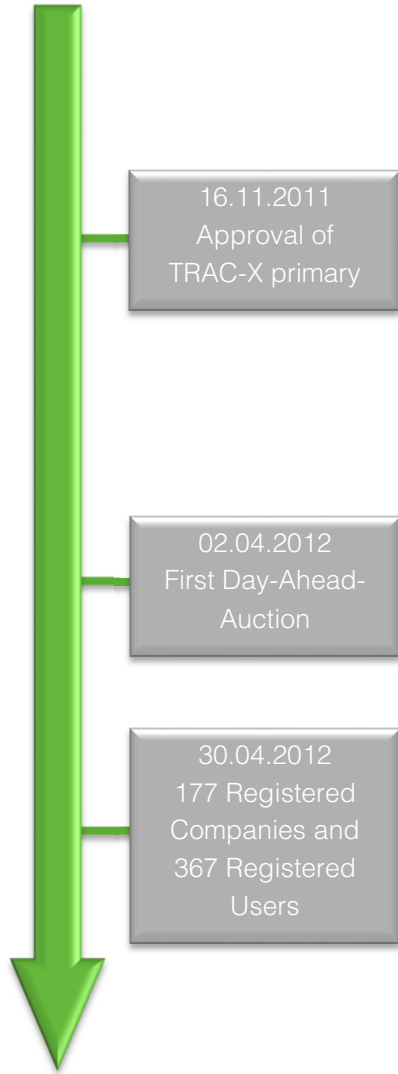
3.1. Retrospective Summary



TRAC-X and the participating transmission system operators faced several serious challenges in 2011. Alongside various changes and innovations on TRAC-X secondary, the conceptualization and realization of TRAC-X primary was pushed forward in the first half of the year. To this end, the twelve TSOs and TRAC-X created a complete customer specification list within two and a half months - forming the basis for the creation of the TRAC-X primary platform.

Following only eight months of implementation time, the market launch was able to take place, on schedule, in August 2011. On 30 August, TRAC-X primary held the first quarterly auction. At this point 108 companies with a total of 207 users had registered on the new platform.

The first monthly auction was held on 13 September and the first annual auction was held on 4 October. The year 2011 also saw changes in company management with Götz Lincke becoming the new managing director of TRAC-X on 01 October 2011 when he took over for Volkmar Müller, who had managed TRAC-X since October 2009.



As a result of the TRAC-X primary platform's technical approval on 16 November and the stability shown since then, the platform has been certified by TÜV, the German Technical Inspectorate. Moreover, the first expansions are already being planned and include, most importantly, the realization of a transport customer interface with TRAC-X primary which is mass market capable as well as the creation of a transparency area which is to provide users with information about auctions which have already been concluded.

Since 02 April 2012 TRAC-X has been successfully conducting day-ahead auctions of firm, assignable capacities at MIPs and BIPs as required by KARLA Gas.

As of the cutoff date, 30 April 2012, six other monthly as well as two quarterly auctions had been carried out on TRAC-X primary. There are currently 177 companies and 367 users registered on TRAC-X primary.

3.2. Evaluation of Auctions on TRAC-X primary

The network operators' transport capacities can be acquired at TRAC-X primary by means of FCFS bookings as well as by auction.

The following goes into further detail regarding the auctions which took place on TRAC-X primary in the period between the beginning of trading on 30 August 2011 and 30 April 2012². FCFS allocation is not a part of this evaluation.

Multi-stage auctions are separated into monthly, quarterly, and annual auctions. Each product has defined trading days which are published in the auction calendar on the platform.

3.2.1. Annual Auctions

² a detailed description of the auction algorithm is given in section 3.2.4

Roughly 11 % of the annual capacities offered on 04 October 2011 were able to be marketed. Each of the annual capacities offered were for the gas business years until 01 October 2026. The following diagram shows the exact values for the annual auctions.

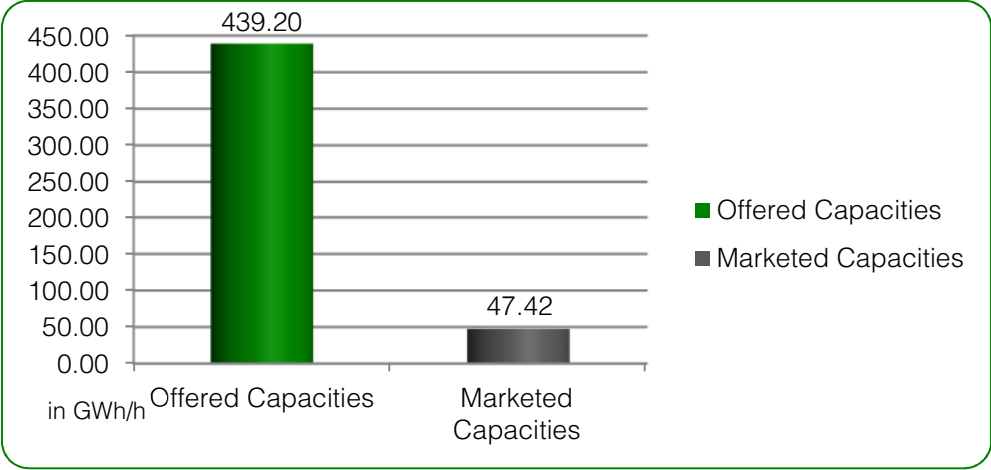


Image 1: Annual Auctions

3.2.2. Quarterly Auctions

Three separate quarterly auctions had been held by the end of April 2012. The demand for the offered, quarterly capacity products was low for each of the three auctions. On average, around 5% of the offered capacities were marketed during these three auctions. The marketing margin was between 2% and 10 %. The following graphics and tables show both the time periods as well as the supply and demand details for the quarterly auctions held.

Q1	01-10-2011 - 01-01-2012	Q5	01-10-2012 - 01-01-2013
Q2	01-01-2012 - 01-04-2012	Q6	01-01-2013 - 01-04-2013
Q3	01-04-2012 - 01-07-2012	Q7	01-04-2013 - 01-07-2013
Q4	01-07-2012 - 01-10-2012	Q8	01-07-2013 - 01-10-2013

Table 1: Overview of the Quarters

Quarterly Auctions 30 August 2011

in GWh/h	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Summe
Marketable Capacity	36.82	44.43	47.86	47.93	56.85	64.01	64.01	64.40	426.30
Marketed Capacity	1.30	4.09	2.45	2.40	4.75	6.50	3.36	3.31	28.16

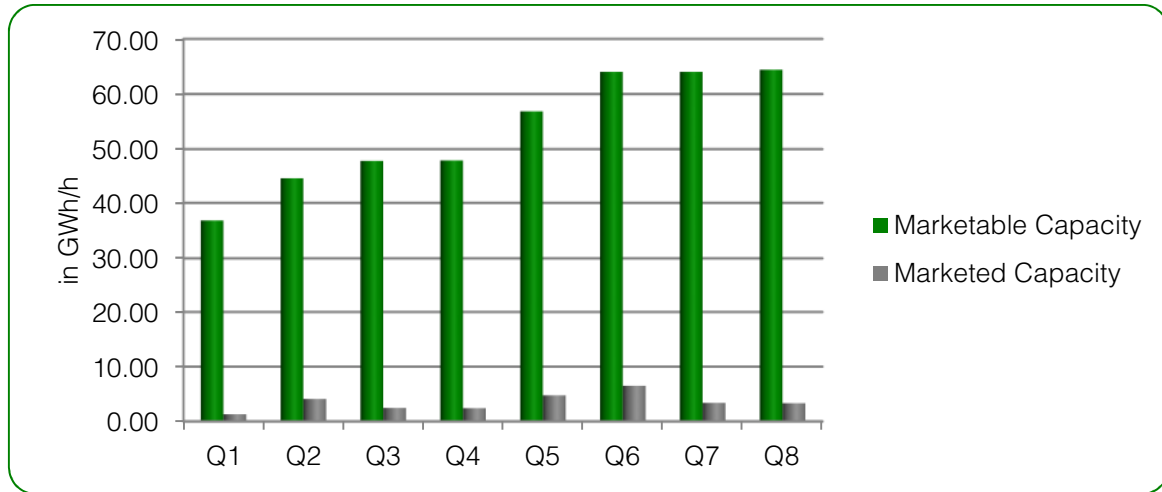


Image 2: Quarterly Auctions 30 August 2011

Quarterly Auctions 15 November 2011

in GWh/h	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Summe
Marketable Capacity	0.00	37.78	43.92	45.26	41.96	54.90	59.20	54.43	337.44
Marketed Capacity	0.00	0.88	2.42	2.42	2.23	1.71	1.90	1.67	13.24

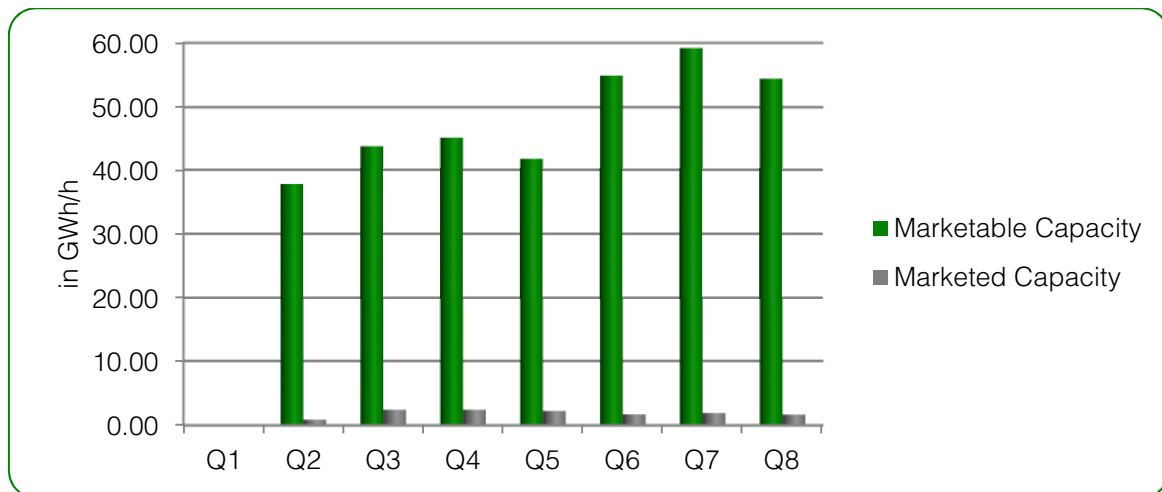


Image 3: Quarterly Auctions 15 November 2011

Quarterly Auctions 14 February 2012

in GWh/h	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Summe
Marketable Capacity	0.00	0.00	55.37	57.2	64.17	68.8	71.06	71.33	387.93
Marketed Capacity	0.00	0.00	4.99	4.73	4.93	1.45	1.26	1.26	18.62

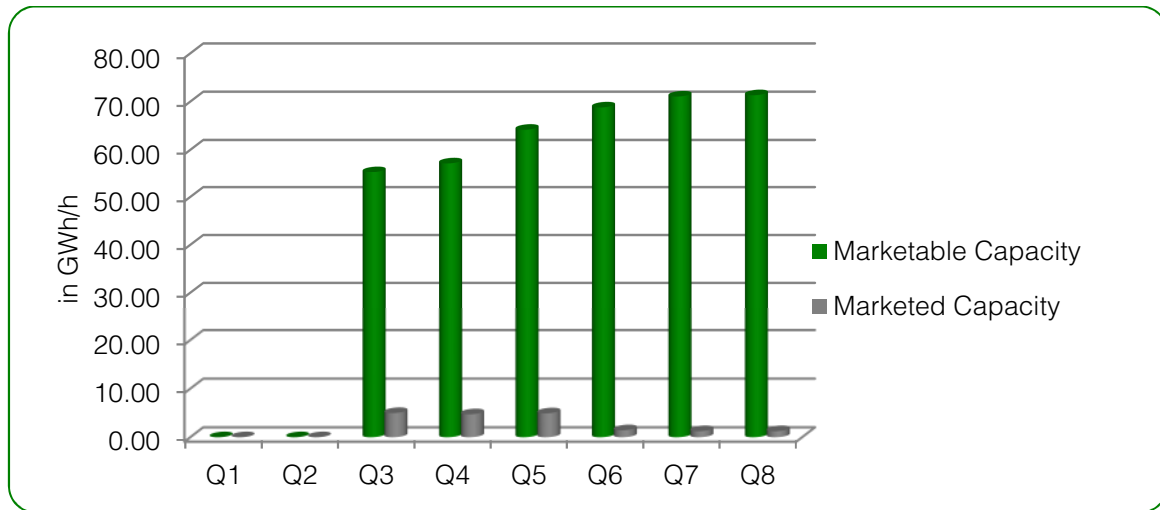


Image 4: Quarterly Auctions 14 February 2012

3.2.3. Monthly Auctions

Compared to those of the quarterly auctions, the capacity amounts marketed during the monthly auctions were much higher at an average of about 13%. This clearly shows that the booking habits of the transport customers are changing from longer term to increasingly short term bookings. The highest marketed percentage occurred for the month of December 2011 with an absolute value of 14.3 GWh/h (equates to 27.1%) In comparison, the maximum for the monthly capacities offered for the first time was reached in February 2012 at 26.16 Gwh/h (equates to 48.4% of the offered monthly capacity). The following tables and graphics show a detailed depiction of the monthly auctions.

in GWh/h	Oct. 2011	Nov. 2011	Dec. 2011	Jan. 2012	Feb. 2012	Mar. 2012	Apr. 2012	May 2012
offered from non-marketed quarterly auctions	24.64	27.21	27.26	28.4	28.87	28.41	50.38	50.38
offered for the first time	6.42	6.54	25.45	0.35	26.16	19.95	9.82	10.91
offered - total	31.05	33.75	52.71	28.75	54.03	48.36	60.2	61.29
marketed	1.18	5.03	14.31	6.03	6.43	7.87	2.06	1.55

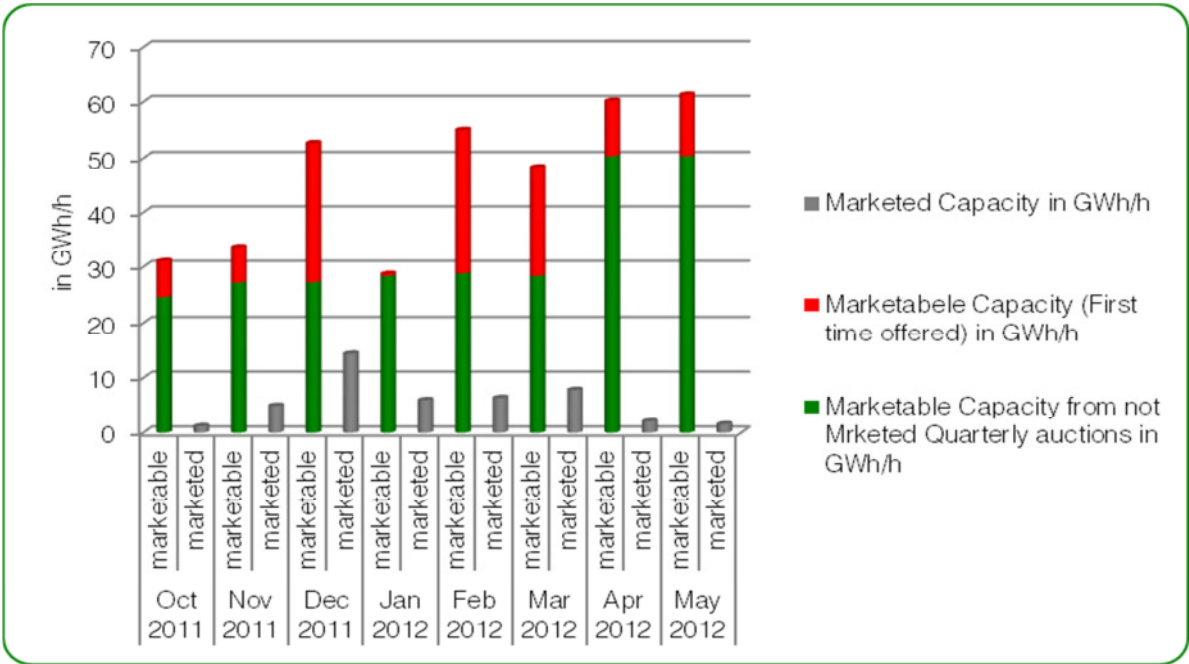


Image 5: Overview of the Monthly Auctions

3.2.4. Analysis of the Auction Algorithm and Evaluation of the Price Steps

Adding to the qualitative assessment of the questionnaire answered by transport customers – in order to receive insight into the quality of the auction algorithm in general and to evaluate the price steps used in the auctions more specifically – the following is meant to provide an evaluation of the auctions which have resulted in excess demand since trading began on TRAC-X primary. The transmission system operators believe that this is exactly the place to find out whether the auction algorithm – implemented on TRAC-X primary in coordination with the market participants and together with the Federal Network Agency, as well as the size of the price steps were chosen correctly or if there is need for adjustment.

Evaluation criteria used for this sort of analysis are the number of price steps which occur until the market price is found as well as the number of so-called undersells (the percentage of previously offered capacities which could not be assigned because of the auction logic despite an existing excess in demand at the starting price).³ It is to be remembered however, that the aim was to resolve a conflict of objectives and to implement a mechanism which made it possible for the transport customers, on the one hand, to approach the market price over several rounds of auctioning while, at the same time, bringing about the auction end (result) in an appropriate length of time.

As a result, a multi-step auction procedure with several price increments was implemented for capacity products with a running period longer than one day. This procedure takes place as follows:

- Assuming a regulated tariff, prices will be invoked in the bidding window (each of which has a time limit) until the sum of the quantity bids is smaller than or equal to the amount of offered capacities. The price for each new

³ The examination and assessment of the bottleneck/shortage situation itself as well as the consequences to be drawn as a result of them is not to be a part of this evaluation report but shall, rather take place as part of the transmission system operators' network development plan.

increment is defined by the platform; the transport customers may only state the quantities that they would like to book at the price named.

- The prices invoked rise by predetermined increments (steps).
- With "large price steps" a quick convergence towards the market price is reached and a price corridor in which the market price lies can be determined.
- A one-time retrograde step equaling one large price step and a successive rise in price by "small step" increments allows for a quick approach towards the market price.

For each auction product (monthly, quarterly or annual) two fixed price steps were defined (each being a markup over the regulated tariff):

- Large price steps amount to 10, 2.5 or 1 cent per kWh/h for the annual, quarterly and monthly auction products.
- Small price steps amount to 2, 0.5 or 0.2 cent per kWh/h for the annual, quarterly and monthly auction products.

In day-ahead auctions, bidders can place their quantity bids at any desired price at markups in price steps of 0.005 cent per kWh/h over the starting price set at zero.

It was consciously accepted that the mechanism may lead to undersells as mentioned above because it was decided that the degree of this problem was estimated to be relatively low in actual practical application and because of the fact that the situation could be remedied to some degree by adjusting the price steps later if need be.

From a total of 2606 auctions carried out on TRAC-X primary (annual, quarterly, monthly and daily capacity auctions) until the cut-off date of 30 April, 2012, a total of 61 (2.34 %) auctions ended with price markups either on the regulated tariff (23 of 320 annual capacity auctions, 17 of 823 quarterly capacity auctions and 4 of 239

monthly capacity auctions) or with a total price greater than zero in daily capacity auctions (17 of 1180 Day-Ahead-Auctions).

In more than half of the auctions (36 of 61 or roughly 59 %) in which the auction did not end after the first bidding window⁴ or did not end with an awarding at a price of zero, the capacities were able to be marketed in full meaning that the above mentioned undersell problem did not occur. In a further ten cases (10 of 61 auctions or 16.39 %) a nominal percentage between 0.02 % and 1.48 % remained unmarketed despite an excess in demand. In four auctions (4 of 61 or 6.56 %) an undersell between 17.39 % und 22.33% occurred (proportional breakdown is available in table 2) and in a further four auctions a percentage between 31.81 and 75.47 % could not be allocated. In seven cases (7 of 61 or 11.47 %) the auction mechanism led to the result that despite an excess in demand, no capacities at all were awarded.

	Number of Occurrences	Percentage of Total Number
No Undersell (0 %)	36	59.0 %
Low Undersell (0.02 to 1.48 %)	10	16.4 %
Mid Undersell (17.39 to 22.33 %)	4	6.6 %
High Undersell (31.81 to 75.47 %)	4	6.6 %
Maximal Undersell 0	7	11.5 %
	61	100 %

Table 2: Overview of the Undersells

Based upon the results presented (in roughly three quarters of the cases with an undersell, it was for the most part far below one percent), it can be assumed that the

⁴ In the case of annual-, quarterly-, and monthly auctions, this window has a length of one day from 8 a.m. to 6 p.m. on the first day of auction.

auction mechanism has fundamentally fulfilled its purpose (see above) and that the undersells are justifiable in light of the goals and aims presented. It is particularly worth noting that a undersell in an annual, quarterly, and/or monthly auction does not mean that the capacities which were not allocated are then no longer available for the market but rather that the unmarketed capacities will be offered once again in the near future. Only in the case of day-ahead auctions does an undersell mean that these are no longer actually explicitly available to the transport customer on a firm basis (however they do, at least, reduce the risk of interruption for owners of interruptible contracts).

Six of the seven maximum undersell cases occurred in day-ahead auctions. The reasons therefore are, in the opinion of the transmission system operators, to be found less in the auction mechanism or the size of the price steps used in day-Ahead auctions, but rather lie more likely in the (spreadsheet controlled) homogenous behavior of the transport customers who attempt to acquire capacities in single-stage day-ahead auctions either completely at a certain price or not at all.

In order to be able to make reliable statements regarding how long the resolution of the bottleneck/shortage situation will take, the TSOs analyzed, whether and to which extent, the above mentioned retrograde step leads to a faster finding of the market price – after fewer rounds of bidding – than a mechanism which increases from the initially named price in small step increments steadily from the beginning onwards.⁵ It was clearly shown that the retrograde step procedure was superior to the alternative arrangement involving the invoking of increased prices based upon the small step increment in 40 of 44 auctions (90.91 %).

In light of these results, the transmission system operators see no need to alter the price steps that have been used to date or the auction algorithm ("retrograde step procedure") as such. The answers provided by the transport customers in the questionnaire also currently support retaining both the auction algorithm as well as

⁵ In concrete terms, this meant comparing the number of steps needed in reality with the number of steps needed theoretically when using the applicable small step increments. Only in this way was it possible to ensure that both methods result in the same final price.

the price step/increments. However, when analyzing the survey of the market participants, it should be noted that it was much less the actual answers provided (which, on average, rated the price step increments as well as the length of the bidding windows and lead times as appropriate, see section 3.3) which was crucial to the outcome but much more the large number of abstentions (column "I am not able to rate this", see section 3.3) and, most importantly, the very low number of answers submitted. According to several market participants, this is due to the short amount of usage time and limited experience that they have had with the TRAC-X primary platform. Resultantly, the transmission system operators will use the coming year to gather more experience and further analyze the resulting data. It may be necessary to adjust the price steps in the future because of the common marketing of capacities together with foreign network operators following the guidelines set forth in the "Network Code on Capacity Allocation Mechanisms" (Network Code CAM). This will take place however – if at all – only in close cooperation and consultation with the Federal Network Agency.

Network Connection Points	Transmission System Operator	Product	Offering in kWh/h	Marketed in kWh/h	Undersell	Undersell in % of Offering	Markup	Number of Windows incl. Initial Bidding Window
Lasow	ONTRAS - VNG Gastransport GmbH	Y	463,840	463,000	840	0.18%	2	3
Lasow	ONTRAS - VNG Gastransport GmbH	Y	463,840	463,840	0	0.00%	10	2
Lasow	ONTRAS - VNG Gastransport GmbH	Y	376,870	376,870	0	0.00%	10	2
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Basel - Exit	terraneets bw GmbH	Y	239,200	239,200	0	0.00%	40	5
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6
RC Thayngen-Fallentor - Exit	terraneets bw GmbH	Y	355,550	355,550	0	0.00%	50	6

Network Connection Points	Transmission System Operator	Product	Offering in kWh/h	Marketed in kWh/h	Undersell	Undersell in % of Offering	Markup	Number of Windows incl. Initial Bidding Window
Eynatten	GASCADE Gastransport GmbH	Q	875,500	680,000	195,500	22.33%	0.5	3
Eynatten	GASCADE Gastransport GmbH	Q	875,500	680,000	195,500	22.33%	0.5	3
Vreden	Open Grid Europe GmbH	Q	1,650,000	1,063,090	586,910	35.57%	3	4
Vreden	Open Grid Europe GmbH	Q	1,650,000	1,363,090	286,910	17.39%	3	4
Emden EMS/ EPT	Thyssengas GmbH	Q	2,883,602	2,883,000	602	0.02%	3	4
Emden EMS/ EPT	Thyssengas GmbH	Q	2,883,602	2,882,900	702	0.02%	8	6
Emden EMS/ EPT	Thyssengas GmbH	Q	2,883,602	2,882,900	702	0.02%	8	6
Lasow	ONTRAS - VNG Gastransport GmbH	Q	865,240	865,240	0	0.00%	12.5	6
Lasow	ONTRAS - VNG Gastransport GmbH	Q	865,240	865,240	0	0.00%	12.5	6
Lasow	ONTRAS - VNG Gastransport GmbH	Q	865,240	865,240	0	0.00%	12.5	6
Emden NPT	Open Grid Europe GmbH	Q	161,943	161,943	0	0.00%	16	10
OUDE STATENZIJL L	Gasunie Deutschland Transport Services GmbH	Q	146,653	100,000	46,653	31.81%	18	10
Lasow	ONTRAS - VNG Gastransport GmbH	Q	579,800	579,800	0	0.00%	20	9
Lasow	ONTRAS - VNG Gastransport GmbH	Q	579,800	579,800	0	0.00%	20	9
Lasow	ONTRAS - VNG Gastransport GmbH	Q	579,800	579,800	0	0.00%	20	9
Lasow	ONTRAS - VNG Gastransport GmbH	Q	579,800	579,800	0	0.00%	20	9
Emden NPT	Open Grid Europe GmbH	Q	161,943	161,943	0	0.00%	22.5	10
Emden EMS/ EPT	Thyssengas GmbH	M	702	0	702	100.00%	0	1
Eynatten	GASCADE Gastransport GmbH	M	732,351	180,000	552,351	75.42%	0.2	3
Emden EMS/ EPT	Thyssengas GmbH	M	2,883,602	2,883,000	602	0.02%	6.2	9

Network Connection Points	Transmission System Operator	Product	Offering in kWh/h	Marketed in kWh/h	Undersell	Undersell in % of Offering	Markup	Number of Windows incl. Initial Bidding Window
Emden EMS/ EPT	Thyssengas GmbH	M	2,883,602	2,883,000	602	0.02%	8.2	11
Oude Stanzijl	Open Grid Europe GmbH	D	203000	160000	43,000	21.18%	0.005	1
Oude Stanzijl	Open Grid Europe GmbH	D	203000	200000	3,000	1.48%	0.005	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	220000	1,616	0.73%	0.005	1
Oude Stanzijl	Open Grid Europe GmbH	D	203000	203000	0	0.00%	0.005	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	221616	0	0.00%	0.005	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	221616	0	0.00%	0.005	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	0	221,616	100.00%	0.01	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	0	221,616	100.00%	0.01	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	0	221,616	100.00%	0.01	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	0	221,616	100.00%	0.02	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	0	221,616	100.00%	0.035	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	150000	71,616	32.32%	0.005	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	221616	0	0.00%	0.01	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	221000	616	0.28%	0.245	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	221000	616	0.28%	0.125	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	0	221,616	100.00%	0.005	1
Lampertheim I / Lampertheim I	GASCADE Gastransport GmbH	D	221616	221616	0	0.00%	0.005	1

Table 3: Overview of Auctions with a Markup

3.2.5. Detailed Analysis of Day-Ahead Auctions

TRAC-X primary has been successfully conducting day-ahead auctions of firm, assignable capacities at MIPs and BIPs as required by KARLA Gas since 02 April 2012. Despite difficult system and process challenges that had to be overcome, the launch of these auctions was carried out, to a great extent, on schedule and without larger technical failures. It is, however, to be mentioned that several of the transmission system operators must still manually implement some of the necessary processes; costing them a great deal in time and resources.

Day-Ahead Auctions in April	
Number of auctions	1,236
Average marketable capacity per day	1,119.20 GWh/h
Average marketed capacity per day	140.45 GWh/h
Number of trading transport customers	16*
Number of auctions with marketed capacity	168
Number of auctions with surplus to the start price of 0 €	11

* Transport customers may have taken part in several auctions and on different days.

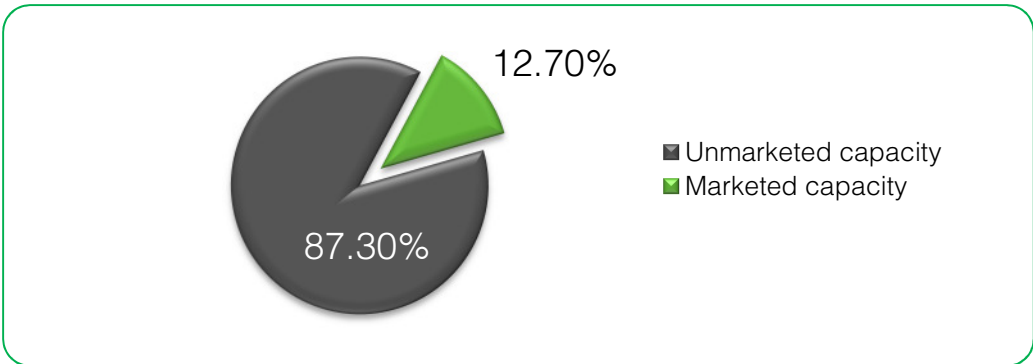


Image 7: Marketed Capacity in day-ahead auctions

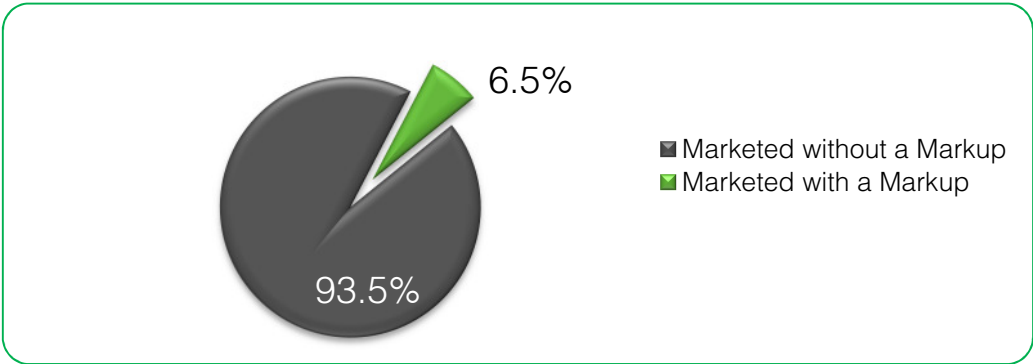


Image 6: Markup of the day-ahead auctions

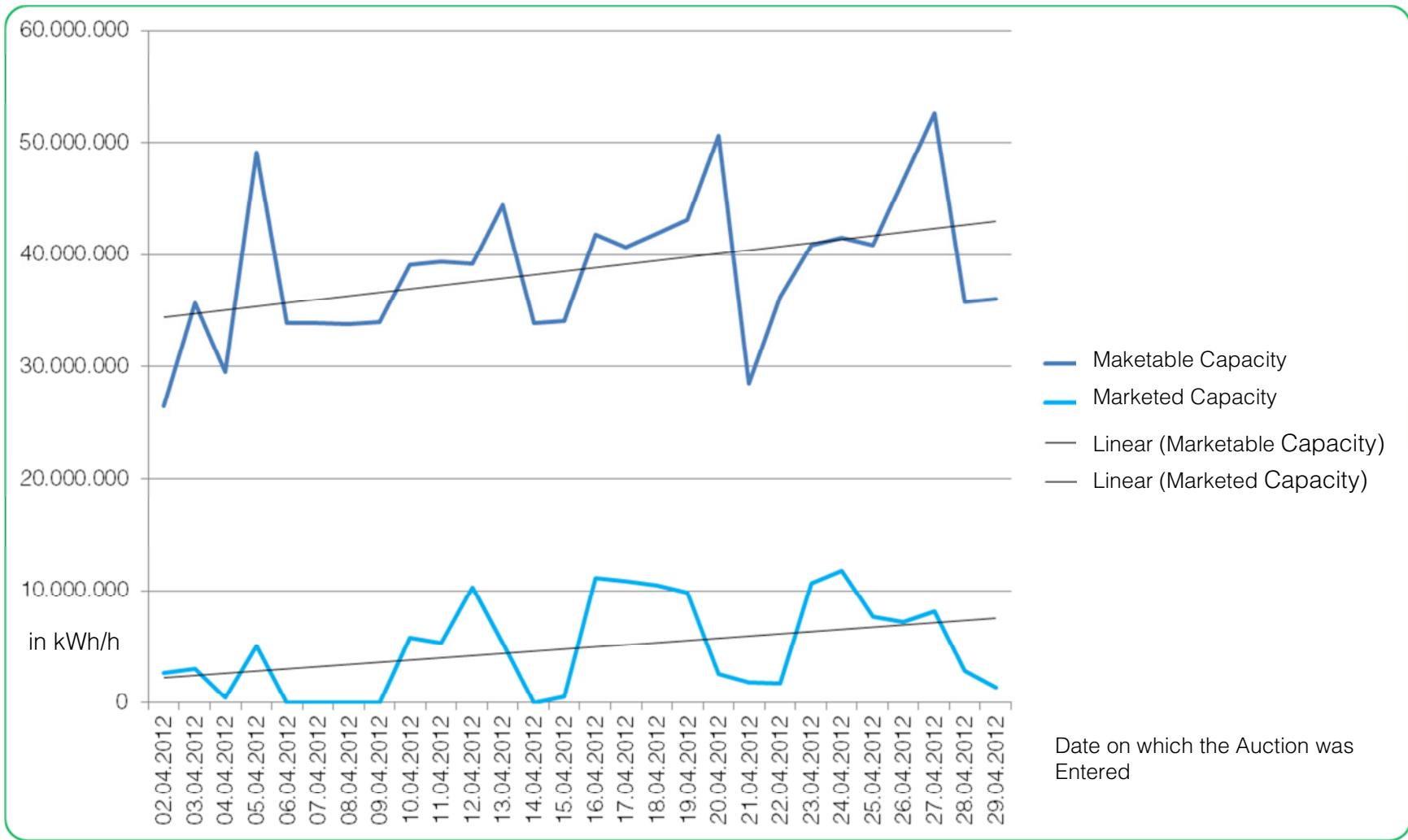
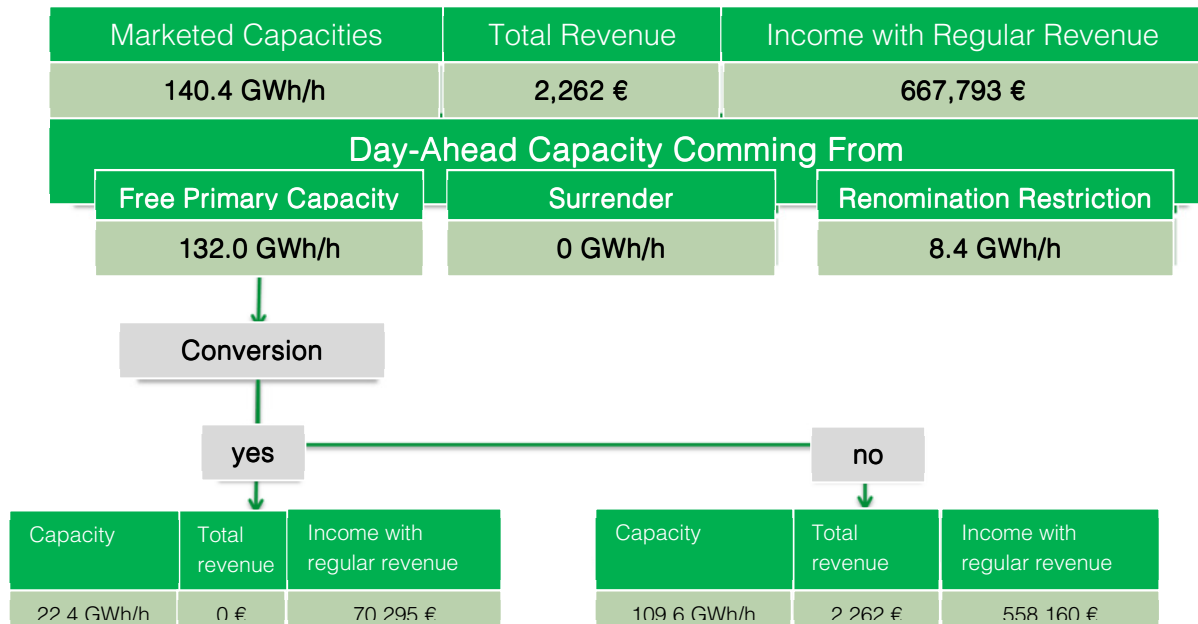


Image 8: Day-ahead auctions April 2012

In contrast however, the results of the auctions carried out thus far have been less satisfactory from a commercial point of view. It has been shown that a significant number of capacities are actually being marketed at a fee of "0" due to their being offered without a minimum price (see image 9)



* Conversion from interruptible to firm capacity

Image 9: Day-Ahead Auction Statistics April 2012

The greatest extent of the capacities marketed did not come from renomination restrictions, and would have therefore already been paid for once by a transport customer but, rather, were largely free capacities that had remained unmarketed in previous quarterly or monthly auctions. It has been found that some transmission system operators have a significant amount of firm capacities on a day-ahead basis available as a result of a massive change in the booking behaviors of transport customers. As a result, transport customers receive capacities, and thereby the extremely important transport services, free of charge.

These missing revenues, which are found in particular on the Thyssengas entry side, must be borne for the most part by the customers on the exit side in order to reach the permitted revenue limit. The result is a further shift of costs from the entry- to the exit side. This further compounds the effect triggered by the banning of short-term markups, the reduction in points as a result of the market area cooperation as

well as the reduction in bookings. The pricing of day-ahead capacities predominately at "0" results not only in the depicted cross-subsidizing of BIPs and MIPs by other points (e.g. for some network operators of transits by domestic entry and, mainly, exit points) but also a cross-subsidy of capacities booked on a short term basis. This results in long-term bookings being at or becoming a disadvantage and that investment signals which make sense from a market oriented point of view being lost. This shift can ultimately lead to predatory (cut-throat) competition when the free-of-charge marketing of entry capacities in day-ahead auctions – for example because of specific differences in capacity marketing – is only to be found by certain transmission system operators and this leads to higher fees on the exit side only for these TSOs as well. The consequences would be very different specific fees on the exit side leading to a further shifting of capacities or even to the need to build an, economically seen, unnecessary pipeline. This, in turn, would lead to a further aggravation of the market situation for the affected network operators and their customers.

Additionally, it has been noticed that several transport customers, in order to optimize their transport costs, not only book interruptible capacities at points where firm capacities are available, but moreover they convert these within the context of day-ahead auctions to firm capacities with a fee of "0" (see also image 9) although these then remain partially unused. The result is that, alongside the provision of services free-of-charge as described above, the revenues that are calculated and planned for in fee models based upon existing contracts are no longer generated i.e. causing an unplanned loss of revenue.

Accordingly, we explicitly welcome the fact that the Ruling Chamber 7, in its Announcement No. 1 for KARLA Gas, makes clear that they do not view the forgoing of a minimum price as an essential element of the auction system but, rather, are open to a change in the regulations governing the minimum price rule. The results observed to date in the day-ahead auctions make clear, without a doubt, that the transport customers are following a strategy of optimizing their transport costs by means of booking behavior which takes advantage of this situation. In particular, at the Zevenaar point (Thyssengas) long-term bookings have been replaced by daily

bookings. It is to be assumed that this process will only intensify in the future and will become more common not only at other entry points but for other transport system operators as well. This assumption is supported by the fact that a transport customer who does not, or is unable, to adjust their booking behavior accordingly will unavoidably suffer from disadvantages caused by higher costs. Furthermore, they will also be forced to bear the cost of revenues lost as a result of the other transport customer optimizing their behavior.

In order to end this observed, system-incompatible behavior on the part of transport customers, the regulated tariff (thus the regulated daily tariff) should be the minimum price for a day-ahead auction as is the case for all other types of capacity products. This is the view taken in the Network Code CAM as well as in the valid regulations governing the majority of the member nations neighboring Germany.

3.3. Assessment of the Evaluation Questionnaire

At the end of March and in the middle of April, TRAC-X emailed a newsletter informing all transport customers registered on the primary capacity platform of the opportunity to express their thoughts regarding the organization and design of TRAC-X primary. This evaluation questionnaire was also made available in the TRAC-X primary download area to all market participants and interested parties. Other opportunities to express their opinions were made available to those interested, not least of which was at the Network User Forum organized by BDEW and held in Berlin on 22 February 2012.

The questionnaire, which was released after close consultation with the Federal Network Agency, presented the market participants the opportunity to express their ideas concerning five topical areas of "Transparency and Usability", "Support", "Communication", "Auction Mechanism" and "General".

16 companies participated directly in the survey with many more participating indirectly by making statements through associations. A positive conclusion can be drawn from both the oral statements and written comments submitted to TRAC-X.

The various topical areas were individually assessed as follows:

"Transparency and Usability"

1=very good, 2=good, 3=satisfactory, 4=could be improved or 5=urgently needs improvement	1	2	3	4	5	I am not able to evaluate this	average
How would you evaluate the user friendliness of TRAC-X primary (separated into the main navigational areas of TRAC-X primary)?							
Main navigational area "Auctions"	1	3	2	5	3	0	3.43
Main navigational area "Bookings"	1	4	4	3	2	0	3.07
Main navigational area "Network Information"	0	3	4	4	2	1	3.38
Main navigational area "Customer Center"	2	4	4	3	0	2	2.83
How would you evaluate TRAC-X primary's structure?	1	7	3	3	0	0	2.57
How would you evaluate TRAC-X primary's ability to resolve problems arising from the use of the platform?	0	4	3	2	0	5	2.78
How would you evaluate the way that auction results are presented?							
as an active participant in an auction	1	1	3	3	4	2	3.67
as an observer of an auction	1	1	1	5	4	2	3.83
How would you evaluate the ability to follow auction proceedings?							
as an active participant in an auction	1	1	3	4	3	2	3.25
as an observer of an auction	1	1	0	7	3	2	3.83

The area "Transparency and Usability" which covers such topics as the user friendliness of various navigational areas and the presentation of the auctions and their processes was rated as positive in general by the market participants. The comments made did, however, provide the following suggestions for improvement:

- In general, the filter function for the "Auction" and "Network Information" should be made easier to use by allowing for capitalization alongside the use of small letters when entering TSO names and interconnection points. Additionally, users requested that the "Auction" area have a filter allowing for a search of marketed or unmarketed capacities and that the "Network Information" area have a filter for neighboring network operators and/or countries.
- Another wish was expressed regarding **data export** in the "Auction" and "Network Information" areas: Alongside the current PDF option, it should be possible to receive the information in a more user-friendly format (CSV or Excel) which, most importantly, can be edited if necessary. This would simplify evaluation of the auctions.
- The **clarity and arrangement of the download area** in the "Customer Center" was also criticized. It was requested that the documents be more clearly sorted and that, if possible, a newsletter be sent when new documents become available.

TRAC-X has registered these suggestions, will evaluate them and plans to make the first improvements during the second half of this year. For instance, a change to the arrangement of the download area is being planned; grouping elements according to topics such as documents for transport customers, general information, legal issues, etc. The adjustments regarding the filtering functions are also of interest but implementation of these changes is being planned for a later point in time as the requirement specifications must first be analyzed.

"Support"

1=very good, 2=good, 3=satisfactory, 4=could be improved or 5=urgently needs improvement	1	2	3	4	5	I am not able to evaluate this	average
How would you evaluate TRAC-X's customer support in general?	3	6	3	0	0	2	2.00
How would you evaluate TRAC-X's professional support?	3	2	6	0	1	2	2.50
How would you evaluate TRAC-X's technical support?	4	1	3	2	0	4	2.30

The **"Support"** area which covers topical and technical customer assistance received a "good" rating on average.

TRAC-X Support deals exclusively with questions regarding technical questions and those of specialized knowledge concerning the primary capacity platform. The transmission system operator is responsible for the offerings and arrangement of the corresponding capacity products.

Solutions for technical problems were provided in an acceptable time frame. In order to answer topical questions of specialized knowledge, it is often necessary to consult other support employees. Responses to these issues were made however, in a quick, helpful and effective fashion.

A few transport customers requested the formation of a centralized support center offering information regarding detailed questions - e.g. capacity bookings, products or offerings, etc. - so that they need not be referred to the transmission system operator(s) in question. TRAC-X is making every effort to train and raise awareness among the service and support employees responsible for such detailed TSO related inquiries. It is, however, not possible to create such a total "know-how transfer" as a result of, among other things, the individual processes within and differing products offered by the transmission system operators.

"Communication"

1=very good, 2=good, 3=satisfactory, 4=could be improved or 5=urgently needs improvement	1	2	3	4	5	I am not able to evaluate this	average
How would you evaluate TRAC-X's communication in general?	1	5	4	4	0	0	2.79
How would you evaluate the publishing of auction results?	1	3	2	3	3	2	3.33
How would you evaluate the nature and extent of communication regarding the way that network operators have responded to certain requests and demands - for instance the introduction of annual-, quarterly- or monthly auctions?	2	0	0	7	1	4	3.50
How would you evaluate the communication in cases of disturbances on TRAC-X primary?	1	3	0	3	0	7	2.71

The evaluation of the "**Communication**" area which covers the primary capacity platform's communication strategy with its customers was more varied.

Assessment showed that both general communication and communication in cases of disturbances are seen as "good". However, the step by step implementation of various requests and/or wishes such as, for example, the introduction of annual-, quarterly- or monthly auctions was criticized. This type of communication should be improved in the future. The biggest criticism expressed within the context of the evaluation came with regards to the lack of transparency when publishing auction results. In the opinion of the transport customers, a reasonable evaluation is not possible on TRAC-X primary at this time.

TRAC-X had already become aware of this problem at an earlier point in time and is currently planning to implement a transparency platform alongside a direct improvement to the auction displays. These actions are set to be realized in the second half of 2012.

To this end, TRAC-X has developed a concept aimed at increasing transparency which involves using the existing infrastructure of the EEX. The increase in

transparency is to take place in two steps. In the first step, a function will be installed on TRAC-X primary making it possible to download the auction results as a XLS-, XML- and, possibly, as a PDF free of charge. In the second step, a download of TRAC-X files through the EEX system will be made possible so that the market may have access to individually tailored information products (free of charge or at a cost). The EEX and TRAC-X service providers are currently formulating the necessary IT specifications and implementation of this concept by the end of 2012 is targeted.

"Auction Mechanism"

1=much too small, 2=too small, 3=exactly right, 4=too large or 5=much too large	1	2	3	4	5	I am not able to evaluate this	average
How would you evaluate the size of the price intervals?							
large price interval	0	3	4	0	0	7	2.57
small price interval	0	4	2	1	0	7	2.57
How would you evaluate the ratio of small to large price intervals? (please enter comments into this field)							
How would you evaluate the length of the bidding windows?							
window for placing the first/initial bid	0	3	3	3	1	4	3.20
bidding windows beginning on the second day of the auction	0	2	3	3	1	5	3.55
How would you evaluate the number of bidding windows per day?	0	3	4	2	0	5	2.88
How would you evaluate the length of the lead times preceding auctions?							
annual auctions	1	1	4	2	1	5	3.11
quarterly auctions	0	3	3	2	1	5	3.44
monthly auctions	0	2	5	2	0	5	3.00

Evaluation of the "**Auction Mechanism**" area which covers the auctions' price steps/increments and bidding windows was exceedingly positive. In particular, the size of the price steps/increments and the lead time lengths were considered appropriate. A more detailed assessment can be found above in section 3.2.4.

"General"

Most of the answers given in the "General" section, for the provision of individual comments regarding the improvement of a specific function of TRAC-X primary, were inconsequential as comments and suggestions of this type had already been made in the corresponding topical area of the survey.

4. Conclusion and Outlook

Eight months after the launch of TRAC-X primary, a positive résumé can be drawn concerning the creation of the primary capacity platform and operation thereof thus far. The transmission system operators and TRAC-X were successful, in the time space of only a few months, in initiating a functioning cooperation model with a centralized auction platform which is

- not only state of the art but is continually being developed and improved upon
- capable of integrating all of the network operators' various backend systems
- led to a considerable standardization of communication methods and other processes and
- enjoys a very high level of market acceptance and recognition from the various parties and users involved

This opinion has been expressed and confirmed as well by transmission system operators in France, the Netherlands, Belgium and Denmark. A coordinated effort will be made to implement the CAM requirements as effectively and efficiently as

can be. The technical components of TRAC-X primary platform have already laid the foundation for this endeavor.

The TSOs involved and participating in TRAC-X will continue to rigorously follow this valued path and intend to develop and improve the platform even further in the coming months. Among other things, one of the network operators' major focuses shall be to concentrate on the further Europeanization of the TRAC-X platform as well as the continuing refinement of its user-friendliness and transparency. The TSOs are convinced that the advancement of these areas will be of great use to the platform users and will contribute to and strengthen the synergy effects between network operators and market participants creating a positive effect for all involved - including the consumer.

The TSOs and TRAC-X will also continue to work together closely and consult with all market participants and European partners in order to further build upon and reinforce the current acceptance of the platform.



TRAC-X Transport Capacity Exchange GmbH
Schillerstrasse 4
04109 Leipzig
Phone: +49 341 699 2990-0
Fax: +49 341 699 299-99
Email: info@trac-x.de