

Purchase channels for German Installation Operators in EU Emissions Trading

Evaluation of a Survey among all Operators of German
Installations on their Purchase Strategies in the Second
and Third Trading Period

Impressum

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Summary

While the number of free emission allowances allocated in the European Emissions Trading Scheme (EU ETS) was significantly reduced at the start of the third trading period, the importance of auctions has increased. In the third trading period, it is expected that approximately half of the allowances will be auctioned. In addition, the European Union (EU) decided in January 2014 in favour of a temporary reduction in the auction budget (so-called back-loading) for the following years. Furthermore, a forthcoming revision of the carbon leakage list may further reduce the available amount of free allowances for allocation. **For many operators, therefore, it will become increasingly important to organise their purchase need cost-efficiently.**

In the summer of 2013, the Ecologic Institute undertook a survey within an environmental research project that was commissioned by the German Emissions Trading Authority (DEHSt), targeting all German installation operators.¹ The objective was to obtain detailed information as to how the installation operators participating in the EU ETS gained access to the European carbon market. In the process, the strengths and weaknesses of the main market entrance channels had to be identified from the installation operators' perspective. Overall, 235 of 995 German installation operators contacted participated in the survey. **Data provided by 196 installation operators was suitable to be used in this study, which is a 20-percent response rate.**

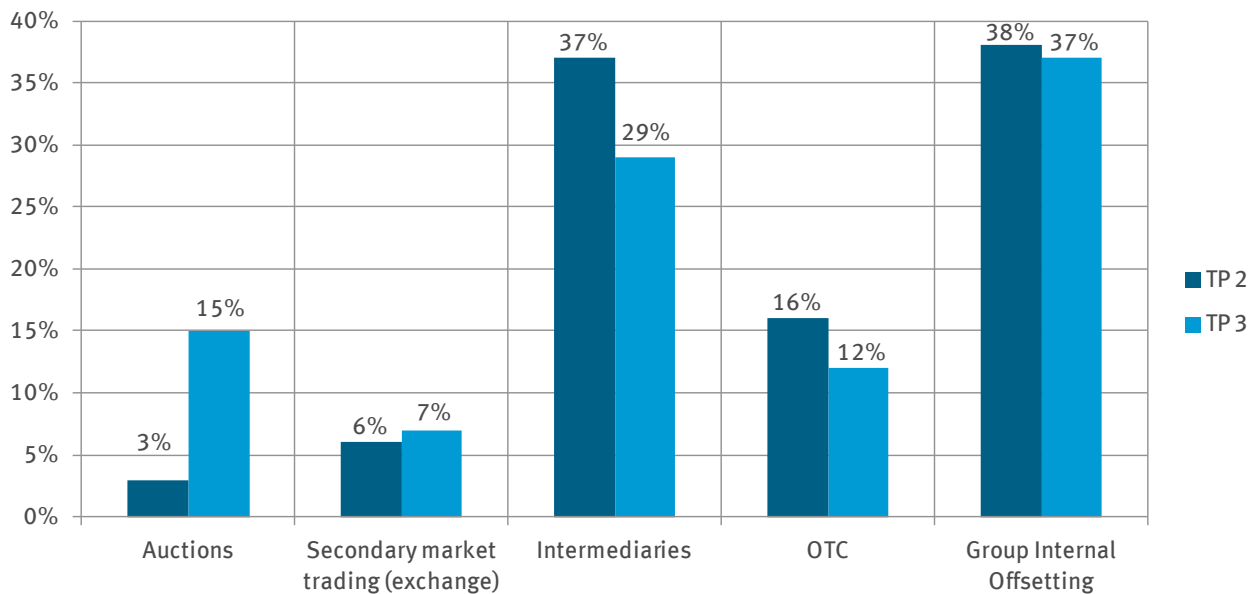
The survey was particularly focussed on participation in auctions, trading on exchanges and trading via intermediaries. Attention was also directed towards the perceived advantages and disadvantages of these purchase channels with respect to certain groups of installation operators (small and medium enterprises as well as large companies) in the second and third trading period (TP 2 and TP 3). The first part of the report analyses the information provided by companies that were subject to emissions trading as early as TP 2. In the second part the data from companies that participated only in TP 3 are studied and the results are compared with those from the first group. **Empirical analyses on the use of market access by German installation operators in the EU ETS have not yet been published at a comparable level of detail.**

An average across all respondents showed that the average use of direct exchange trading (secondary market and auctions) was only about nine percent in TP 2.

Internal offsetting (38 percent) and the use of intermediaries (37 percent) were by far the most widely used TP 2 purchase channels of the respondents.

The relatively small group of companies that have only been subject to emissions trading since TP 3 have similar purchase strategies as the large group of companies that have participated in the EU ETS since TP 2. Group internal offsetting (37 Percent) and the use of intermediaries (29 percent) are by far the most intensively used purchasing channels (cf. Figure 1) here.

¹ „Monitoring and evaluation of the implementation of EU auction processes for the 2013-2020 and 2012-2020 trading periods in the aviation sector from an economic perspective“



Source: Ecologic Institute

Figure 1: Average use of purchase channels depending on time of entering emissions trading (TP 2 and 3 TP)

Volume-weighting the average use with the corresponding volumes purchased by installation operators, however, leads to a very different result. Group internal offsetting made up five percent of the total volume purchased by the companies and thus played the smallest role in TP 2. **Direct trade with other companies (also called OTC trading), exchange secondary trading and participation in auctions made up about 69 percent of the aggregate purchase in TP 2, although the average non-volume-weighted part of these channels was only around 25 percent.**

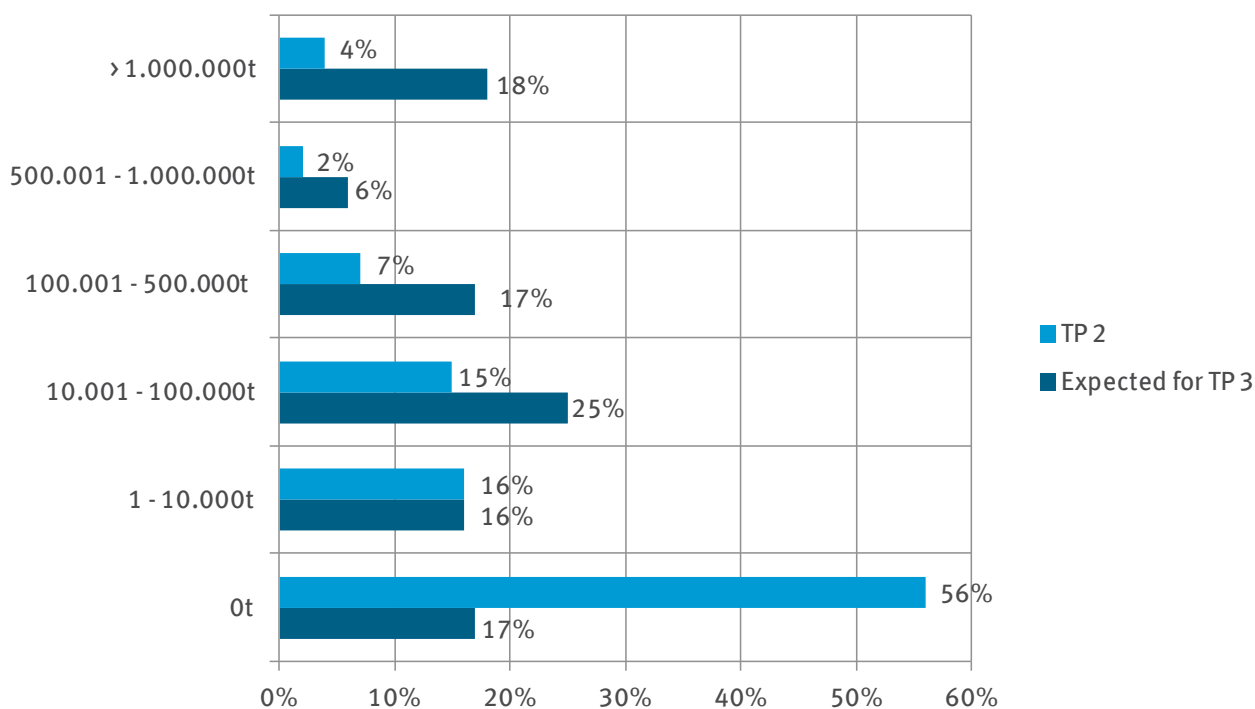
Remarkably, 80 percent of all responding enterprises made their total individual purchase in TP 2 exclusively through a single market access channel. **Companies with a high purchase demand preferred a diversified trading strategies three times more frequently than companies with a low demand. Most of the enterprises pursued a singular trading strategy.**

Essentially only a very small number of companies directed their individual TP 2 purchase strategy towards acquiring strategic potential. The prime target for the majority of the enterprises, however, was minimising expenses and cost.

The choice of TP 2 purchase channels is primarily depended on the installation operators' absolute purchase demand. Thus, enterprises with a very small purchase need primarily use group internal offsetting. Companies with a small-to-medium purchase need chiefly purchased through intermediaries while firms with a very high purchase need primarily participated in auctions, secondary exchange trading and OTC trade.

With regard to companies' purchase demand in TP 2 it should be noted that only about half of the respondents emerged as buyers in the market. Only 13 percent of all companies had a high purchase need of about 100,000 tonnes and only four percent had a very high demand of about 1,000,000 tonnes.

However, companies expect a significant increase in the purchase demand for TP 3. The proportion of respondents that generally saw a purchase need, and had to arrange this through one of the purchase channels, increased from 17 percent to 56 percent, compared to 2 TP. Based on the information from those interviewed, the proportion of companies with a high purchase need, above 100,000 tonnes, would more than triple. The proportion of those companies with a very high demand, in excess of 1,000,000 tonnes, increased the most. Around 18 percent of all companies expect an equally high purchase need in TP 3 (cf. Figure 2).



Source: Ecologic Institute

Figure 2: Companies' purchase demand in TP 2 and the expected purchase demand in TP 3 (in tonnes) as a fraction

The overall financial burden for trading participation (that is, for internal administrative costs and direct charges and fees to intermediaries) was below 20,000 euros on an annual average for the majority of the responding non-exchange participants in TP 2. The internal administrative costs for the trading organisation were, on an annual average, below 10,000 euros for the largest part of the respondents that did not participate in TP 2 exchange trading. Also, direct charges and fees for intermediaries were below a threshold of 10,000 euros for about 86 percent of the responding non-exchange participants.

96 percent of those companies not participating in the exchange did not have to deposit additional collateral with the respective intermediaries, apart from fees and charges. Around 79 percent, i.e. the vast majority of companies said that they did not provide any specific evidence about the company's activities to the intermediary before signing a contract either. **The overall trade burden of some exchange participants, however, exceeded the annual 100,000 euros threshold, not counting additional clearing bank fees and charges.**

Almost half of the respondents are planning to adjust their previous purchase strategy in TP 3. Thus, shifts are likely to take place in the carbon market in the future. As the most common answer, 46 percent of companies that want to adjust their strategy in TP 3 indicated that they intend to progressively meet their needs through intermediaries. It can be seen that market access via intermediaries will remain by far the most common channel used by German installation operators in the future. However, auctions and direct trade between companies will also gain in importance.

In view of the growing importance of the auctions it should be noted that 53 percent of the responding companies feel they were not sufficiently well informed about EU ETS auctioning. 47 percent said that DEHSt is the preferred source of auctioning information. 44 percent wish to obtain additional information on this topic from DEHSt. However, only 15 percent of the companies interviewed are aware of the advantages of an „Auction only“ membership for participating in the EEX primary auctions.

1 About this Report

This report evaluates the results of a survey conducted by the Ecologic Institute on behalf of the German Emissions Trading Authority (DEHSt) in the summer of 2013. It was conducted among German installation operators as part of an environmental research project.² The report starts with a section on methodology (2) in which we first present the objective of the survey in more detail (2.1). After that, the surveyed group (2.2) and the design of the questionnaire (2.3) are outlined. In the next section we analyse the results of the survey (3) and summarise the general information about the participating companies (3.1). Following that we take a detailed look at the results with regard to companies who participated in the EU ETS in the second trading period, specifically the exchange non-participants (3.2.6) and the exchange participants (3.2.7), and compare these results with the data from companies which were subject to emissions trading from the third trading period on (3.3). We conclude this section with an analysis of the knowledge status of the respondents about auctioning (3.4). The report ends with an evaluation of survey results and an outlook of the future (4). Attached to the report is a detailed overview of the participating company responses, as they relate to each of the five channels for purchasing allowances.

2 Methodology

2.1 Objective of the Survey

The initial objective of the survey is to create an overview of the strategies employed by installation operators in the second trading period of the EU ETS for purchasing allowances. Based on this segmentation, conclusions on future developments in the third trading period can be drawn.

The goal is to identify the strengths and weaknesses of the respective additional purchase channels with respect to specific categories of installation operators.

Currently there is hardly any reliable data available about the level of fees and charges which intermediaries such as banks or brokers levy against German installation operators for accessing the market. This also applies to the general access conditions that must be met by an operator when trading via intermediaries.

² „Monitoring and evaluation of the implementation of EU-auction processes for the trading period 2013-2020 or 2012-2020 in aviation from an economic perspective“

Particular attention is given to the participation in auctions, exchange trading and trading through intermediaries. Since 2013 about half of all EU-wide allocations in the EU ETS are being auctioned. In addition to installation operators, intermediaries also participate in the auctions. It is expected that this type of market access is of great importance for many plant operators and will continue to become more important in the third trading period.

2.2 Audience Surveyed and Survey Period

Since the objective of the survey is an analysis of market access channels for installation operators, the survey was conducted with the population of all administrated installation operators in Germany. This group was addressed directly via DEHSt's e-mail distribution list. To safeguard privacy, the Ecologic Institute created the questionnaire on the institution's own servers. The DEHSt then invited the operators to participate in the survey via email and provided each participant with an individually assigned access key. This ensured that only the desired group participated in the survey. If several people were contacted within a company, they received a common access key. Respondents were able to save the survey at any time and continue at a later date within the survey period. Multiple responses by installation operators were technically excluded.

A positive side effect of establishing contact with participants was to alert installation operators to the existence of the auctions and other market access options. The survey period began on 21/06/2013 and ended on 12/07/2013. During this period, 235 companies participated. The survey was conducted soon after the conclusion of the second trading period.³

2.3 Questionnaire Design

The questionnaire was divided into a general and a specific section. The general section included both a question about the size of the company and questions about the respondent's knowledge level of the auctions. All participants were asked the same questions in the general section.

The specific section distinguished between when the installations operators were subject to partaking in the EU ETS (i.e. TP2 or TP3), as well as according to whether the respondent's participated in exchange trading or not. The analysis in this report is based on the described structure of the questionnaire.⁴

Key questions to all respondents were:

- ▶ How does your company acquire the necessary emission allowances - mainly through direct participation in primary or secondary market trading or through intermediaries?
- ▶ What specific market access channels do you use?
- ▶ Why do you use these types of access?
- ▶ What are the barriers to participation in the primary or secondary market?
- ▶ What are the company's internal costs associated with the participation in trading and the costs resulting from third parties' fees and charges?
- ▶ What is your level of knowledge about auctioning?

³ The deadline for the last reporting year of the second trading period was 30/04/2013.

⁴ The questionnaire is available at the following link: http://www.ecologic.eu/sites/files/project/2014/documents/ecologic_institute_surveys_-_fragebogen_fuer_anlagenbetreiber.pdf

3 Analysis of the Survey

3.1 Overview of Respondents

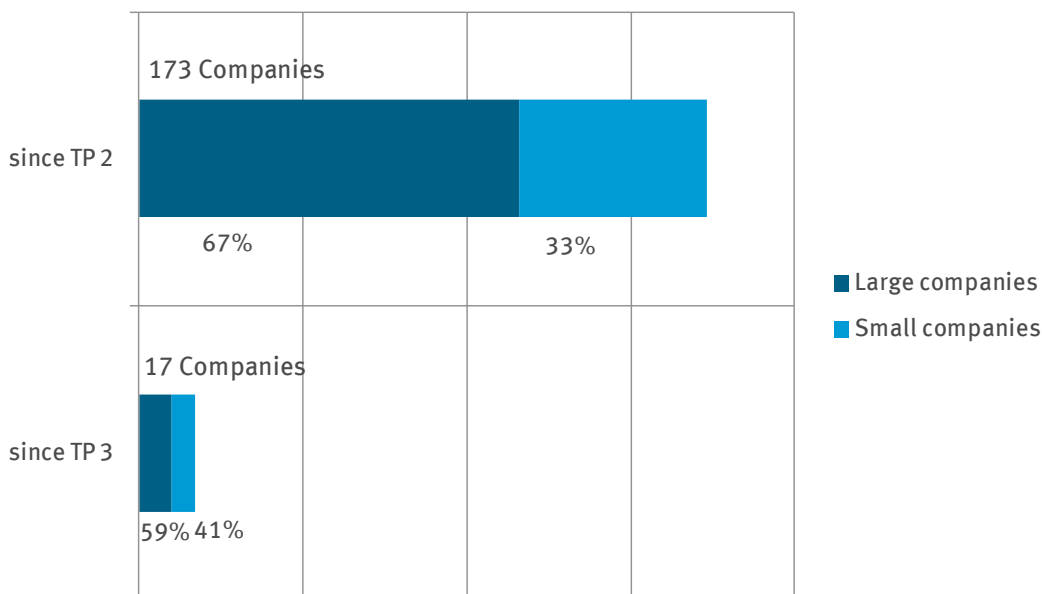
196 of the companies surveyed submitted complete or partially usable responses. In order to obtain meaningful results, only the complete responses are taken into account in the subsequent analysis.

Among the responding companies were 130 large companies and 66 small or medium-sized enterprises (SME⁵). 34 percent of the responses were from SMEs, therefore, about two-thirds of the responses were from large enterprises.

A total of 173 companies indicated that they were already subject to emissions trading in the second trading period. This corresponds to a 91 percent share. Among the companies that were already subject to emissions trading in the second trading period, 116 were large companies (67 percent) and 57 SMEs (33 percent).

17 companies (nine percent) had not yet participated in emissions trading in the second trading period, which is a relatively low proportion. Among these 17 companies, there are 10 large companies that constitute a share of 59 percent, and seven SMEs, i.e. 41 percent. Figure 3 summarizes the results.

157 companies that were already subject to emissions trading in the second trading period, and thus the vast majority of 95 percent, have already been subject to emissions trading since 2008. Therefore, the majority of the data analysed comes from companies that have been gaining experience in emissions trading for at least five years.



Source: Ecologic Institute

Figure 3: Distribution of responding companies by the date on which they became subject to emissions trading and by company size

5 SMEs have an annual turnover of less than EUR 50 million, a balance sheet total of less than 43 million euros, less than 250 employees and a maximum of 25 percent of the company belongs to one or more larger companies.

3.2 Companies Subject to Emissions Trading since TP 2

3.2.1. Overview of key figures about acquisition channels in TP 2

A total of 95 companies surveyed provided concrete details about their purchase strategy in the second trading period. In addition to the absolute level of purchases they required⁶, the companies were also asked in what relative proportions they used the individual purchasing channels to cover their demand. **They could choose from the following purchase channels: participation in auctions, exchange-based secondary market trading, trading through intermediaries, direct trade with other companies (so-called OTC trading) as well as the intra-company settlement.**⁷

On the basis of this data, three initial analyses can be performed:

1. Determination of the **average usage of a purchase channel averaged over all respondent companies**. This metric indicates the average share of a particular purchase channel in total purchases on company level. Initially this is done without volume weighting the absolute levels of the purchase requirement (see section 3.2.1.1).⁸
2. Determination of the relative share of a purchase channel in the aggregate purchase requirements of all responding companies. This metric indicates the volume-weighted percentage of a particular purchase channel of the total purchase demand of all companies (see section 3.2.1.2).⁹
3. Determination of the **frequency of the individual purchase channels relative to the population of all responding companies**. This metric indicates how many companies have ever used a particular purchase channel in proportion to the entire respondent population. According to this, conclusions can be drawn as to the diversification of purchase strategies (see section 3.2.1.3).

3.2.1.1 Average use of purchase channels in TP 2

Figure 4 summarizes the results for the **average use of a purchase channel, averaged over all responding companies**.

Accordingly, it becomes apparent that, on average, direct participation in auctions played only a minor role for companies in TP 2. Among the different purchase options available to companies, the share of auctions was on average only three percent. Also relatively insignificant was the proportion of exchange based secondary market trading at six percent. **Thus the average use of direct trading on exchanges (secondary market and auctions) in TP2 was on average about nine percent across all responding companies.**

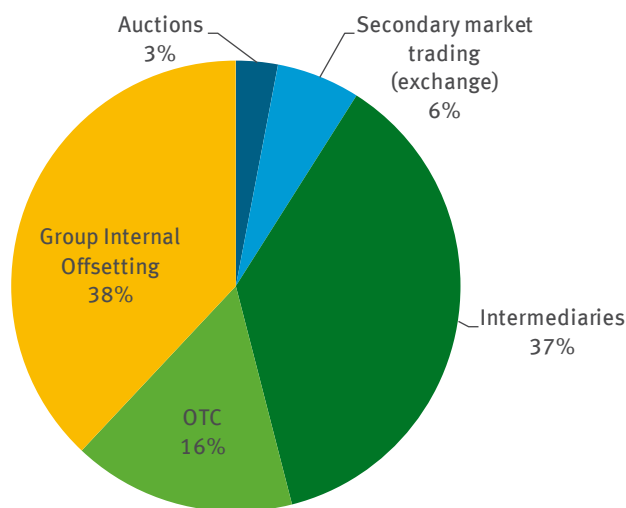
However, at 38 percent and 37 percent respectively, internal offsetting and the use of intermediaries were on average the most important acquisition channels among the responding companies in TP2. Following these two main channels was direct trade with other companies at 16 percent, also known as „over the counter“ trading (OTC).

⁶ Within a trading period, the need for allowance purchases may deviate for many reasons from the theoretical amount derived from calculating free allocation of emission allowances and the amount of the surrender obligation. So this may result in sales of allowances by an operator which he actually needs, in order to create short term liquidity. At a later date this will create a need for this operator to purchase additional allowances in a corresponding volume, in order to cover his surrender obligations.

⁷ Trade via intermediaries includes additional purchases made through banks, traders, brokers, trading departments of other installation operators and consultancies.

⁸ Average of volume-weighted shares of each channel in total trade of all companies.

⁹ Volume-weighted proportion of a purchase channel of the aggregated total purchases of all companies. The purchase requirement was not polled as an absolute value, but as a span. Therefore, a classified arithmetic mean was first calculated for each company to determine the individual purchasing needs.



Source: Ecologic Institute

Figure 4: Average use of acquisition channels in TP2

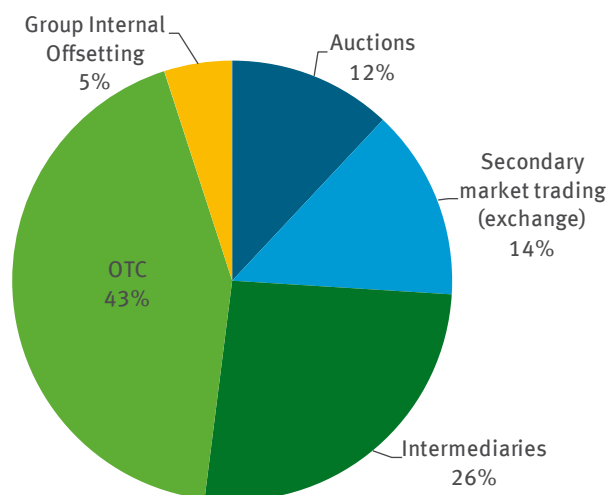
In addition to the purchase channels, the types of market access companies chose for any sales of emission allowances in TP2 was also queried. A total of 79 companies provided specific information about their selling strategies. At 49 percent, trade through an intermediary is by far the most important channel for sales transactions. This was followed by group internal use of surpluses at 29 percent. On average, about 16 percent of the individual sales volume was sold on the OTC market. Trade on stock exchanges amounted to only six percent of sales transactions. Again, companies could provide multiple answers, so when a company used different types of market access concurrently this was also taken into account.

The responding companies' choice of market access in TP2 was therefore relatively independent of whether they were used to cover the demand for additional allowances or for sales transactions. This result is as expected, since the operational establishment of a market access can generally be used for both types of transactions. This even applies to participation in auctions, as these usually required a fully-fledged exchange access in TP2, which could also be used for sell orders.

3.2.1.2 Share of acquisition channels in the aggregate purchasing volume in TP2

Below, the **relative proportions of a purchase channel in the aggregated purchase demand of all responding companies are determined.**

For this, the channel choices made by companies are examined depending on the amount of purchases transacted there and then calculated relative to the aggregate additional purchase requirements of all companies. This results in the following (Figure 5): **in TP 2, companies transacted by far the largest portion of total additional purchases (43 percent) via OTC trade.**



Source: Ecologic Institute

Figure 5: Share of acquisition channels in the aggregate additional purchase volume of all companies in TP 2

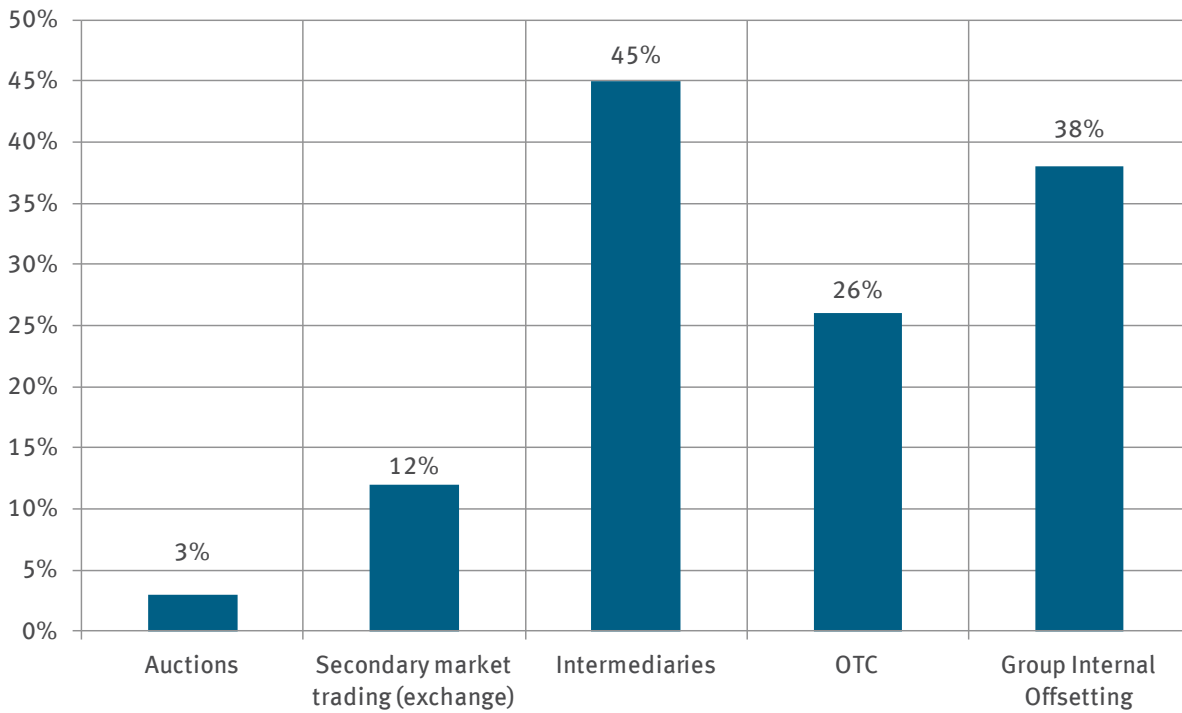
However, with a five percent share, group internal offsetting played the smallest role for the total purchase requirements of companies in TP 2. Companies covering their additional demand directly through exchanges (secondary market at 14 percent and auctions at 12 percent) and via intermediaries, amounted to 26 percent in TP 2 each.

Therefore, volume weighting of the average use in this section compared to the previous section leads to a significantly different result. Taken together, OTC trading, exchange based secondary market trading and auction participation accounted for about 69 percent of the aggregated purchase demand in TP 2. However, the average non-volume-weighted share of these channels was only a total of 25 percent (average usage). The reverse is true for group internal offsetting and trade through intermediaries. Here the volume-weighted share was 31 percent, and the non-volume-weighted share was 75 percent in TP 2.

3.2.1.3 Relative frequency and diversification of purchase channels in TP 2

A result comparable to average use emerges with respect to the relative frequency of the individual acquisition channels among operators. Around 45 percent of all companies stated that they covered their purchase needs at least partially via intermediaries. **About 38 percent used group internal offsetting. In TP 2 almost every second responding company making purchases chose market access through intermediaries. More than one third was involved in internal offsetting.**

26 percent of the companies used OTC trading with other companies for their purchases in TP 2. Twelve percent participated in exchange-based secondary market trading, and three percent took part in auctions. Figure 6 summarizes the results for the relative frequency of acquisition channels.



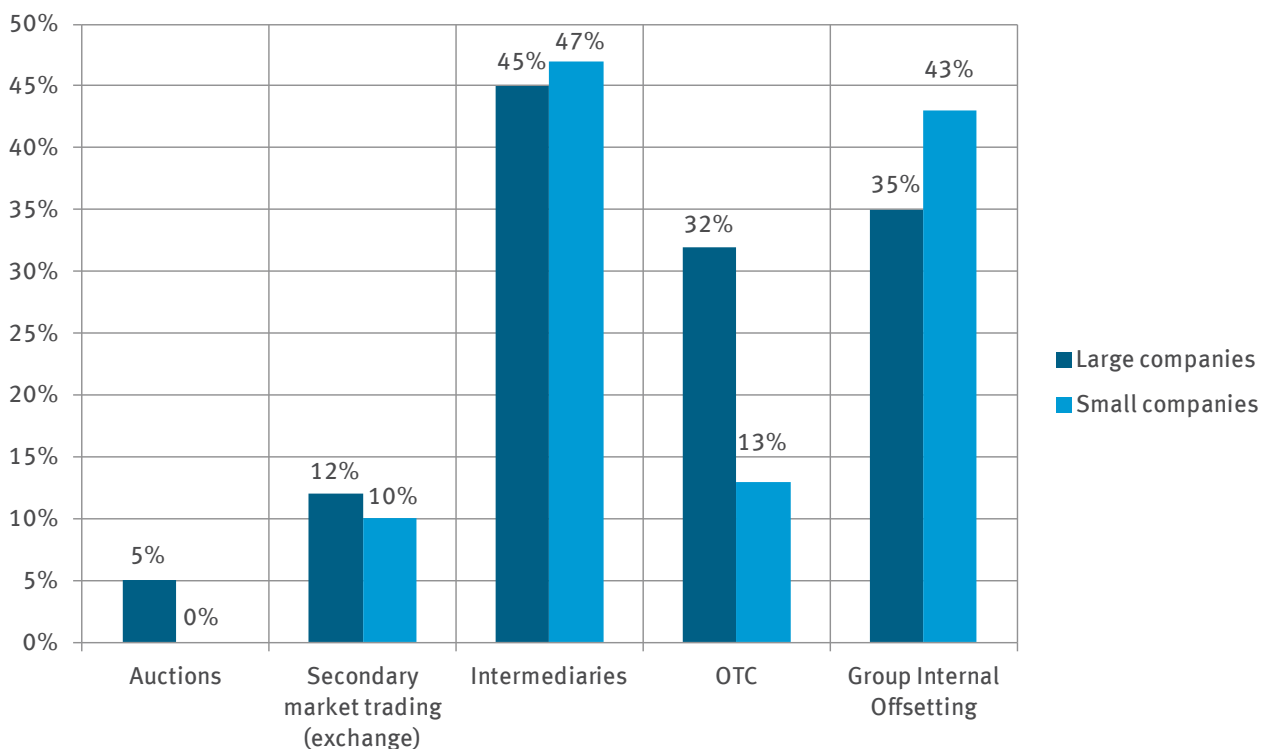
Source: Ecologic Institute

Figure 6: Relative frequency of purchase channels in TP 2¹⁰

Figure 7 shows the relative frequency of purchasing channels differentiated by SMEs and large enterprises. It should be noted that not a single SME responded that it had participated in auctions in TP 2. Participation in exchange-based secondary market trading was also slightly below average for SMEs. **SMEs' activity in OTC trading was significantly below average in TP 2.**

Compared to large companies there were no significant differences in the use of intermediaries. **However, SMEs were above average in their use of group internal offsetting for covering their needs in TP 2.**

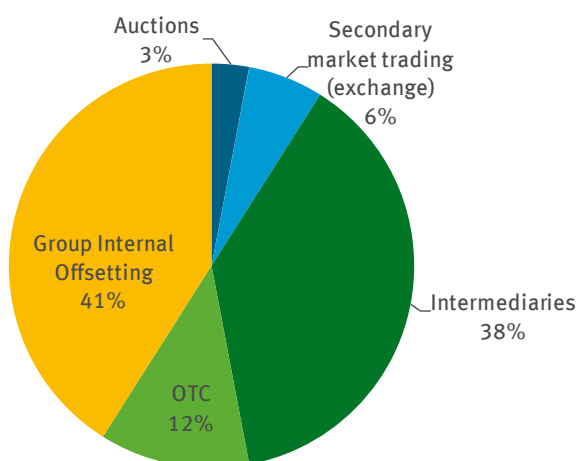
¹⁰ The sum of the percentages is greater than 100 percent because multiple responses were allowed.



Source: Ecologic Institute

Figure 7: Relative frequency of the acquisition channels in TP 2 differentiated by large and small companies¹¹

It is noteworthy that 80 percent of all responding companies covered their entire purchase needs in TP 2 using a single market access channel. The share of SMEs in this group was 34 percent. Companies with a singular trading strategy primarily used group internal offsetting (41 percent) and purchased allowances through intermediaries (38 percent). Another twelve percent transacted their purchases entirely through OTC trading. At three percent and seven percent respectively, very few of the responding companies focused exclusively on auctions or exchange-based secondary market trading (see Figure 8).

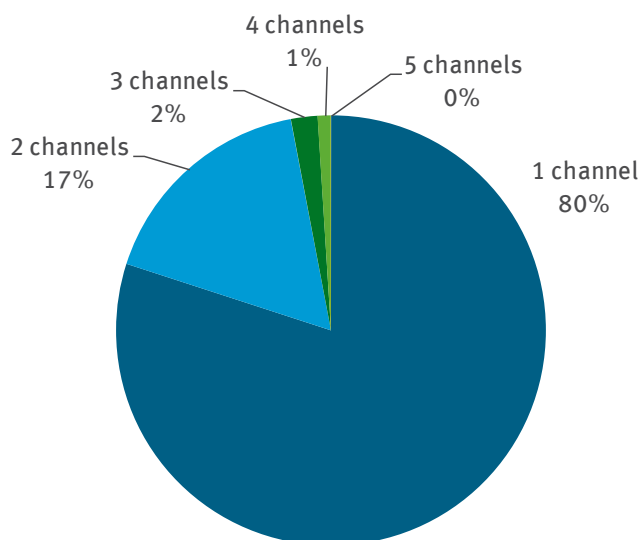


Source: Ecologic Institute

Figure 8: Market access chosen in singular purchase strategies in TP 2

¹¹ The sum of the percentages is greater than 100 percent because multiple responses were allowed.

One in five companies (20%) claimed to have pursued a diversified acquisition strategy in TP 2. Of these 19 companies, however, no company was completely diversified across the five surveyed market access types. None of the SMEs pursued a strategy with more than two acquisition channels. Figure 9 groups the companies according to the number of market access channels used. **The majority of the SMEs that adopted a diversified approach chose to do so with two unique purchase channels in TP 2.**



Source: Ecologic Institute

Figure 9: Companies by number of purchase channels in TP 2

3.2.1.4 Interim results for the analysis of acquisition strategies in TP 2

From the previous analyses, the following can be initially stated:

- ▶ At 38 percent on average, group internal offsetting was the most prevalent channel used by companies to cover their purchase needs (average usage). In addition, 38 percent of all responding companies took advantage of this acquisition channel. In particular, the large group of companies with a singular trading strategy preferred this channel (41 percent). However, only five percent of the aggregated purchasing demand of all companies was covered in this way (relative frequency). **This suggests that in TP 2, internal offsetting was particularly prevalent among companies with a very low absolute purchase need.**
- ▶ At 37 percent on average, trading via intermediaries was also heavily used by companies to cover their purchase needs (average usage). Trading via intermediaries was the most frequently used acquisition channel (relative frequency), at 45 percent. A total of 26 percent of the aggregated purchase needs of all companies were covered in this way. **This suggests that in TP 2, trade via intermediaries was used by many companies with a small to medium absolute need to purchase.**
- ▶ Combined, participation in auctions (three percent), exchange-based secondary market trading (six percent) and direct trade with other companies (16 percent) were on average used by only 25 percent of companies to cover purchase needs (average usage). However, 69 percent of aggregate purchasing needs of all businesses were covered by these three channels (12 percent auctions, 14 percent secondary market trading, and 43 percent OTC trading). **From this it can be deduced that in TP 2, exchange-based secondary market trading and direct trade with other companies were probably used especially by companies with a high absolute need to purchase.**

The following section closely examines the relationship between the design of the purchase strategy and the level of the purchase demand of an installation operator.

3.2.2. Purchase Demand in TP 2

131 companies provided specific details about their emission allowances acquisition demand in TP 2. Of these, more than 56 percent had no need to purchase allowances. 16 percent of companies had a very low level demand to purchase up to 10,000 tonnes, 15 percent said they have had a shortfall between 10,001 and 100,000 tonnes. Only a few companies had a need greater than that. About seven percent bought 100,001-500,000 tonnes. Two percent of the companies needed to purchase 500,001-1,000,000 tonnes. Four percent of respondents required a very high demand of more than 1,000,000 tonnes (see Figure 10).

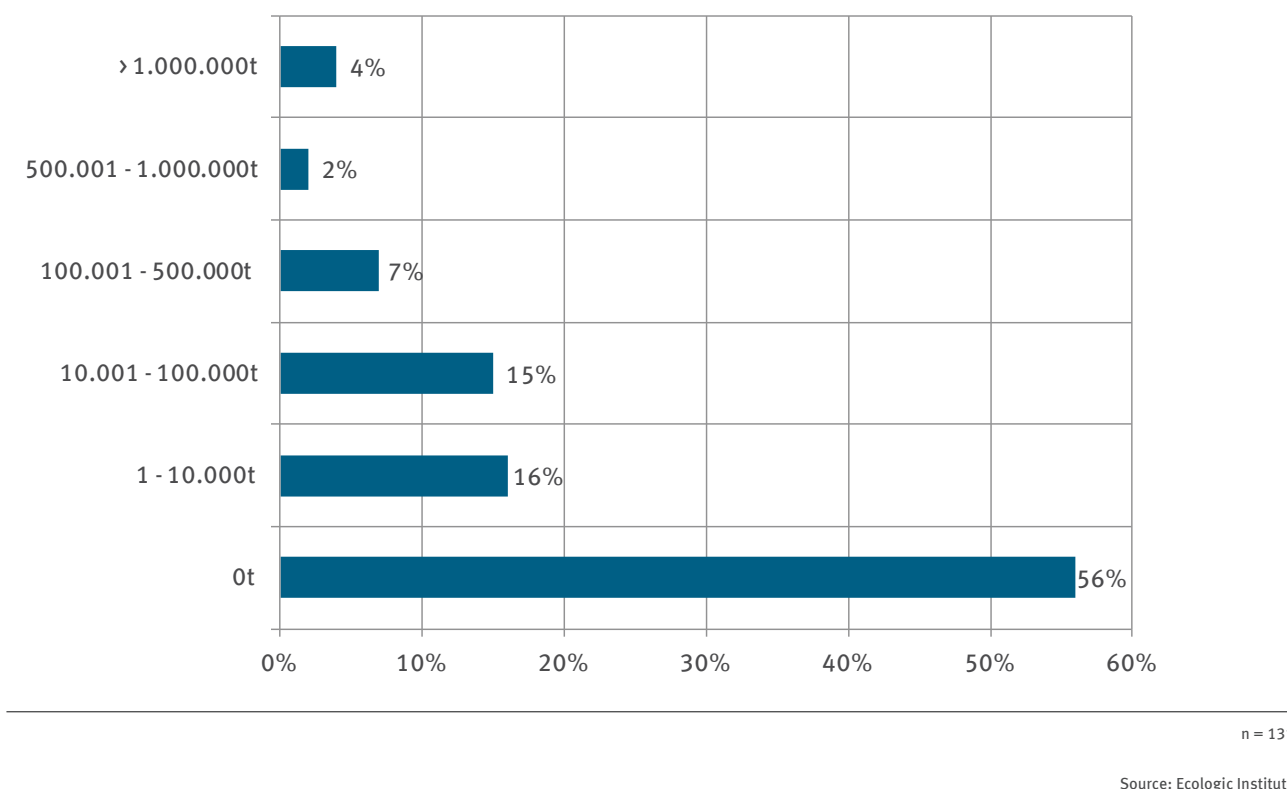


Figure 10: Emission allowance acquisition needs of companies in TP 2 (in tonnes)

Slightly more than half of the responding companies had no need to purchase in TP 2.

Therefore, these companies did not appear on the market as buyers. It can also be stated that the existing demand for emission allowances was rather low, mainly in a range of up to 100,000 tonnes. A total of 87 percent of companies needed to purchase less than 100,000 tonnes.

A high level of purchase demand of more than 100,000 tonnes in TP 2 was found in only 13 percent of all companies. Only four percent had a very high demand of over 1,000,000 tonnes. Thus, only 17 and five companies, respectively, stated they had a “high” or even “very high” purchase demand in TP 2.

3.2.3. Correlation between purchase strategy and purchase demand in TP 2

A total of 56 companies provided specific information about their level of additional demand and, at the same time, also answered the question about the acquisition channels they used in TP 2. For the subsequent analysis the companies are divided into the following two categories:

- ▶ Installation operators who needed to purchase up to 100,000 tonnes in TP 2
- ▶ Installation operators who needed to purchase more than 100,000 tonnes in TP 2

Of the 40 companies with a shortfall of up to 100,000 tonnes, 63 percent traded via intermediaries and 23 percent used group internal offsetting. Following that was OTC trading, exchange trading, and auction participation with a respective relative frequency of 18 percent, ten percent and three percent. For 65 percent of companies with a low level of demand, intermediaries or internal offsetting were the only acquisition channels. **Purchases via intermediaries and internal offsetting were by far the most common and most important market access types for the group of companies with low demand of up to 100,000 tonnes in TP 2.**

Among the companies with low demand, the percentage of those who purchased using only a single channel was slightly above average at 85 percent. **The vast majority of companies with low demand pursued a singular purchase strategy in TP 2.**

Among the 16 companies that had a high purchase demand in excess of 100,000 tonnes, eight companies, i.e. 50 percent, pursued a singular strategy, while another 50 percent applied a diversified purchase strategy. **The proportion of companies that had a diversified strategy was thus significantly higher among companies with a high purchase demand in TP 2 than in the group with a low purchase need (50 percent versus 15 percent).**

75 percent of the companies with a high purchase demand relied on OTC trading, 44 percent on trading with intermediaries, 31 percent on exchange trading, 13 percent on auctions and six percent on internal offsetting. For 33 percent of the companies that were active in OTC trading, this segment represented the only or at least the most important market access. **Thus OTC trading was by far the most common and most important market access in TP 2 for the group of companies that had a high purchase demand. The following Table 1 summarises the results.**

Table 1: Trading strategies according to the volume of purchase demand in TP 2

Purchase need < 100.000 t		Purchase need > 100.000 t	
Companies having a singular trading strategy in %	85	Companies having a singular trading strategy in %	50
Companies having a diversified trading strategy in %	15	Companies having a diversified trading strategy in %	50
Relative frequency of purchase channels in %		Relative frequency of purchase channels in %	
Internal offsetting	23	Internal offsetting	6
Intermediaries	63	Intermediaries	44
OTC	18	OTC	75
Exchange trading (secondary)	10	Exchange trading (secondary)	31
Auctions	3	Auctions	13

As Table 1 shows, the proportion of direct trade on exchanges (secondary market and auctions) was about three times higher among companies with a high purchase demand than among companies with a rather low purchase need (44 percent versus 13 percent). **As has been shown, companies with a high need preferred OTC trade. The proportion here is approximately four times higher than among companies with only a minor purchase need (75 percent versus 18 percent).**

In particular however, companies with a low demand preferred internal offsetting and intermediaries in TP 2. Internal offsetting was about four times more common than among companies with a high demand (23 percent versus six percent). Trading through intermediaries was nevertheless still one and a half times more common (63 percent versus 44 percent). **A closer look at the strategies chosen by the companies in TP 2 shows that the purchase volume has a significant impact on the strategies selected.**

In addition to dividing companies into those having low or high purchase demand, company size is taken into account to analyse trading strategies in more detail in Table 2 below. This additional criterion suggests that, in the case of companies having a low purchase demand, the company size did not have a discernible influence on the decision whether a singular strategy or diversified strategies have been chosen. This is also true for the relative frequency of the individual channels. However, because in the survey data there is only a very small number of SMEs with a high purchase demand, this does not allow any conclusions to be drawn on whether the „company size“ criterion has influenced the choice of strategy. **It can be said that companies decided their TP 2 market access trading strategy depending on the volume of their purchase demand, while the company’s size played a minor role, if at all.**

Table 2: TP 2 trading strategies according to the volume of purchase demand and company size

Purchase need < 100.000 t			Purchase need > 100.000 t		
	SME	Large company		SME*	Large company
Companies having a singular trading strategy in %	87	84	Companies having a singular trading strategy in %	0	53
Companies having a fully diversified trading strategy in %	13	16	Companies having a fully diversified trading strategy in %	100	47
Relative frequency of purchase channels in %			Relative frequency of purchase channels in %		
Internal offsetting	20	24	Internal offsetting	0	13
Intermediaries	67	60	Intermediaries	100	40
OTC	13	20	OTC	100	73
Exchange trading (secondary)	13	8	Exchange trading (secondary)	0	33
Auctions	0	4	Auctions	0	13

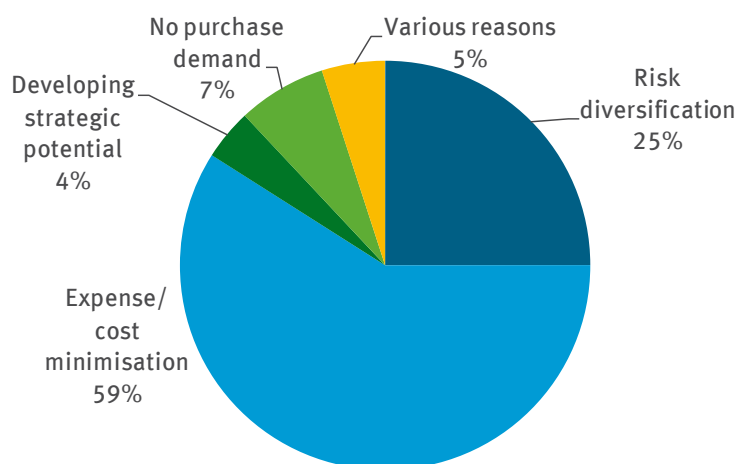
* Corresponds to a single company in this case

The companies were also interviewed in the survey about their motives for selecting an purchase strategy in TP 2. The results are presented in the following section.

3.2.4. Motives for selecting an purchase strategy in TP 2

112 companies provided information on their detailed TP 2 strategic motives. Expense or cost minimisation was the most common reason (59 percent of the companies) for choosing the strategy to meet their purchase need. This criterion was particularly important for companies that pursue a singular trading strategy: 63 percent of them indicated this reason for the chosen strategy.

The second most common reason was risk diversification (25 percent). Only four percent of the companies wanted to develop strategic potentials. Two companies used the free response option and indicated that they acted strictly in accordance with their company's guidelines. Figure 11 below summarises the results.



Source: Ecologic Institute

Figure 11: Reasons for selecting the TP 2 purchase strategy

It is noteworthy that only four percent of the companies considered developing a strategic potential important. These strategic considerations play no role for those companies that purchased their emission allowances through intermediaries and those that were able to cover their need within the company. Looking at those companies that have met their needs through OTC trading, it can be seen that a relatively large number of them considered the development of strategic potential as a reason to choose this purchase channel.

The large group of companies that have met their purchase need in TP 2 using a singular trading strategy may experience pressure to take action in TP 3 of the EU ETS. This may be the case, for instance, when these companies' expected purchase demand increases and cannot be cost-efficiently met by relying on the previous strategy.

This may be of relevance especially for those enterprises that have actuated their purchases exclusively via group internal trade. This applies under the premise that the possibilities for internal trade in TP 3 may be fundamentally limited by a general extension of the purchase demand.

However, the companies' responses show that risk diversification and the development of strategic potential in TP 2 have not yet played a significant role in choosing the purchase channels.

The companies were asked in the survey about their expectations and plans for TP 3. The results are presented in the following section.

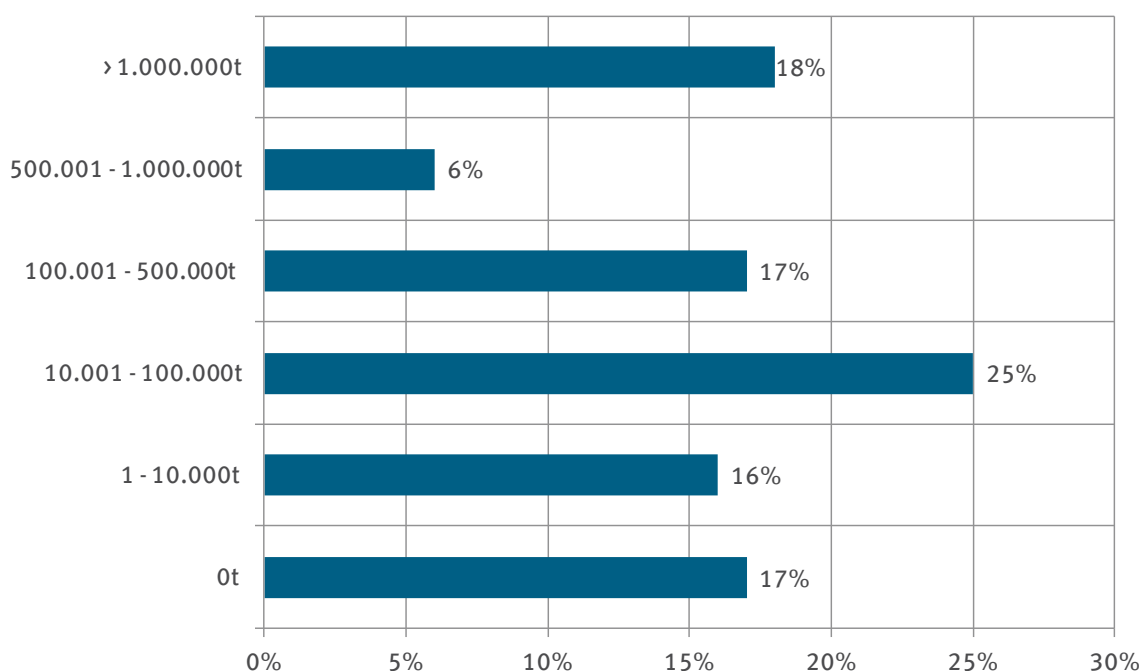
3.2.5. Outlook to TP 3

3.2.5.1 Expected purchase demand for TP 3

The vast majority of the companies expect a shortfall of emission allowances in TP 3. Around 83 percent of 130 respondents expect a demand for emission allowances. Only 17 percent said they did not expect a purchase demand. 56 percent of companies considered the allocation of allowances sufficient in TP 2 (see Section 3.2.2). **Thus the share of enterprises that generally see a purchase demand and should organise this via one of the acquisition channels approximately doubles from 44 percent (TP 2) to 83 percent (TP 3).**

If, in accordance with Section 3.2.2, the expected purchase need in TP 3 is divided into categories of low need (one tonne to 100,000 tonnes) and high need (above 100,000 tonnes), it can be seen that about 41 percent of the companies expect either a low or a high need in TP 3. In the last trading period, the proportion of companies with low need was 31 percent and the proportion with high need was 13 percent. This increases the future importance of both groups. **Judging by the answers of the respondents, the proportion of companies having a high purchase need (above 100,000 tonnes) would more than triple from 13 percent (TP 2) to 41 percent (TP 3).**¹²

The proportion of companies with a very high demand in excess of 1,000,000 tonnes will show the strongest increase in TP 3. About 18 percent of the companies assume a correspondingly high purchase need in TP 3 (four percent in TP 2). The very significant increase in this acquisition segment is not surprising, as free allowances have no longer been granted for electricity generation since 2013. The affected installation operators must therefore purchase the full amount of allowances in the future. The figure below summarises the results of the expected purchase need for TP 3.



Source: Ecologic Institute

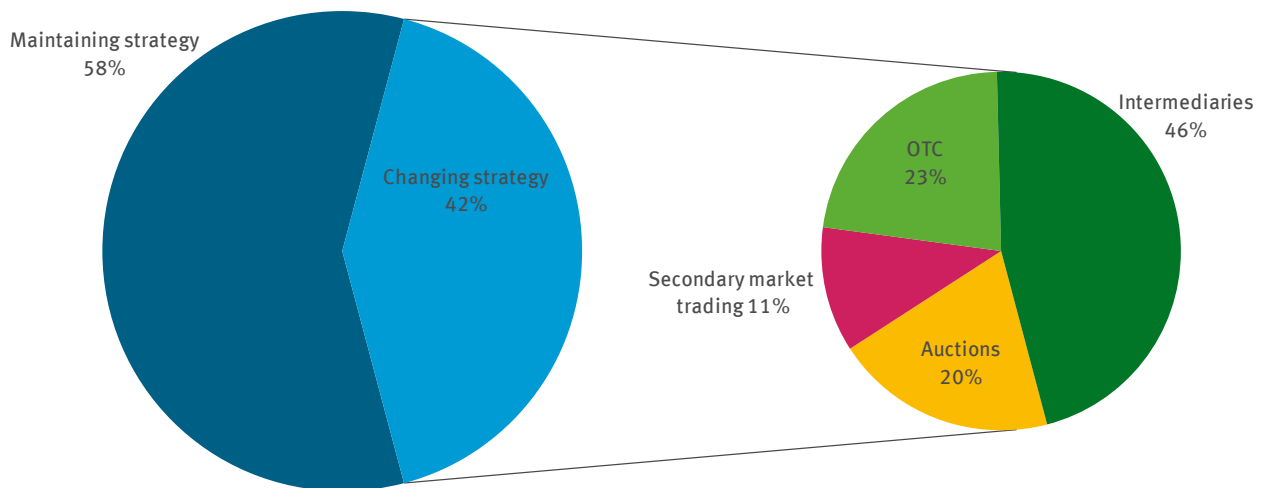
Figure 12: Expected purchase demand of emission allowances for TP 3 (in tonnes)

3.2.5.2 Plans for the adjustment of purchase strategies for TP 3

A total of 127 companies reported on their planned purchase strategies in TP 3. 58 percent of the companies want to maintain their current strategy. **42 percent, i.e. somewhat less than half of the respondents intend to adjust their current acquisition portfolio for TP 3.**

¹² It should be noted that the aggregated purchase need refers to a period of five years in TP 2 and to a period of eight years in TP 3. Basically, a direct comparison of the two trading periods is fraught with difficulties. The choice of the acquisition strategy may depend on both the purchase amount in a given year as well as the total demand within a trading period. In the survey, the total purchase need during a trading period was chosen as a reference quantity.

46 percent of the companies that want to adjust their strategy for TP 3, if necessary, reported that they intend to meet their needs increasingly through intermediaries. The second largest group of companies (23 percent) intend to meet their needs increasingly through the OTC market in the future. 20 percent envisage participating in auctions in the future and eleven percent said that they would meet their needs primarily in the secondary market. Figure 13 summarises the results.



Source: Ecologic Institute

Figure 13: Purchase channels to be increasingly used in TP 3

3.2.5.3 Adjustment of acquisition strategy and purchase needs in TP 3

104 companies provided specific information on the amount of their expected purchase demand in TP 3 and also answered the question about their strategic planning. Looking at the companies' data concerning adjustment of their trading strategies differentiated according to the amount of their anticipated purchase needs, the following picture emerges:

- ▶ **Companies with a very high expected purchase demand (about 1,000,000 tonnes) (n = 23)**
For 18 percent, i.e. 23 companies, the expected demand in TP 3 is in the very high range of over 1,000,000 tonnes (four percent in TP 2). 12 of these 23 companies are also considering changing their strategy currently. Half of these companies envisage progressively meeting their needs through auctions in the future. In addition to intensifying their auction participation, these companies, in particular, are considering an intensification of OTC trading. **This underlines the assumption that auctions and OTC trading is seen by many companies as a suitable purchase channel when the demand for emission allowances is very high.**
- ▶ **Companies with a high expected purchase demand (between 100,000 tonnes and 1,000,000 tonnes) (n = 29)**
22 percent, or about one in four companies expect a high purchase need between 100,000 tonnes and 1,000,000 tonnes for TP 3 (nine percent in TP 2). A very high proportion of these companies, i.e. 59 percent, are thinking of changing their strategy. **41 percent of the companies with a high expected purchase demand can imagine increased involvement in OTC trading.**

► **Companies with an medium expected purchase demand (between 10,000 tonnes and 100,000 tonnes) (n = 32)**

25 percent i.e. the largest group of the respondents expect an medium purchase need between 10,000 tonnes and 100,000 tonnes for TP 3 (15 percent in TP 2). 53 percent of these companies are considering adjusting their purchasing strategy. 76 percent of the companies which are considering adjusting their purchasing strategy plan to buy via intermediaries in the future.

This is consistent with previous findings, which indicated that trade via intermediaries is particularly attractive for companies with a low to medium purchase demand.

► **Companies with a very low expected purchase need (under 10,000 tonnes) (n = 20)**

About 16 percent of the companies have a very low expected purchase demand of less than 10,000 tonnes in TP 3. This is the same proportion as in TP 2. About 70 percent of these companies do not consider modifying their current strategy. The vast majority of these few companies who are considering changing their strategy can envisage meeting their future needs primarily via intermediaries. **Thus, intermediaries seem to continue to be a preferred channel when the demand for emission allowances is low.**

3.2.5.4 Conclusions for TP 3

This may lead to relevant shifts in the carbon market in TP 3. The reason is that many companies expect to have to buy in the first place. Their proportion among the companies surveyed significantly increases from 44 percent (TP 2) to 83 percent (TP 3). Overall, about 42 percent of companies said they want to adapt their future acquisition strategy.

The companies that want to adapt wish to progressively rely on intermediaries. The proportion of companies purchasing via intermediaries is therefore likely to continue to rise in TP 3. In particular, companies with a purchase demand of up to 100,000 tonnes want to focus more on this market access channel in the future. 45 percent of the respondents said that they would meet their TP 2 purchase needs, at least partly, through intermediaries. **From today's perspective therefore, it is apparent that market access through intermediaries will be the most commonly used access channels by operators of German installations in TP 3.**

However, auctions and OTC trading will also experience growing importance as purchase channels in TP 3. In particular, companies that expect a large shortfall want to rely on these market access routes. Because of the anticipated high levels for these individual purchase needs, the importance of both channels is likely to be disproportionately high in relation to the aggregated purchase demand of all companies. In TP 2, only three of the companies participated in auctions. OTC trading, however, was already well-established with a relative frequency of 26 percent. 16 companies said that they wanted to be more actively involved in auctions during TP 3. 63 percent of them have an expected purchase demand in excess of 100,000 tonnes. 67 percent of the 18 companies that consider extending the OTC trade expect a purchase demand of above 100,000 tonnes.

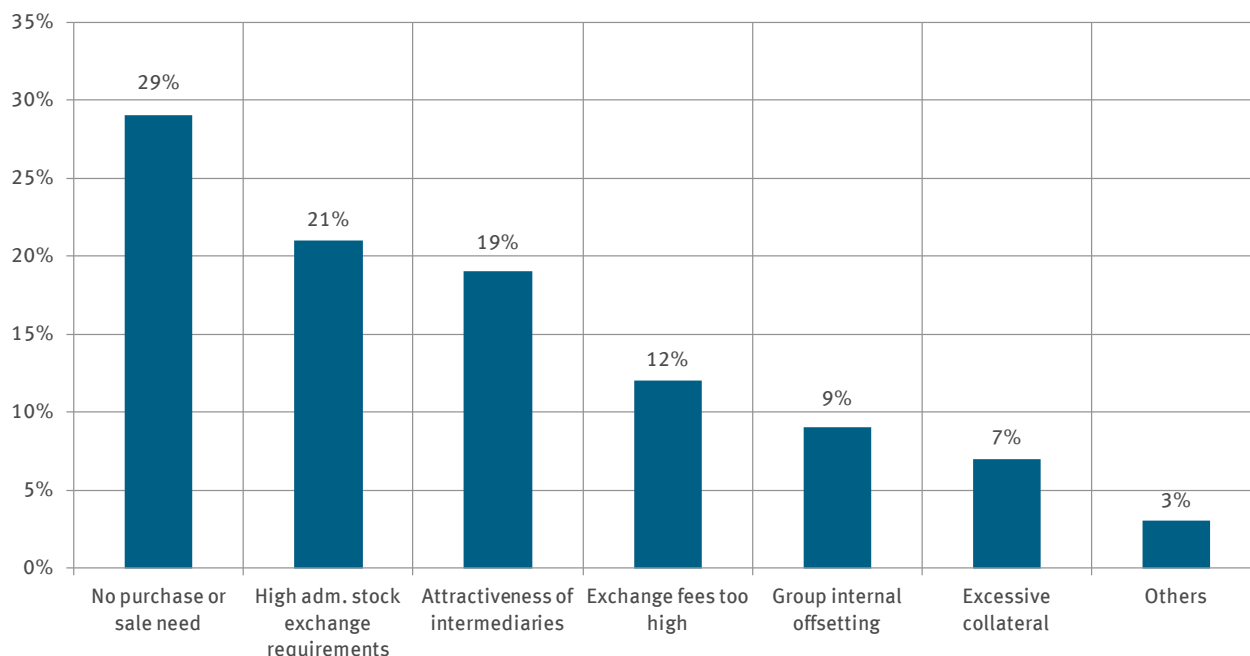
Sections 3.2.6 and 3.2.7 will now give the initial evaluations of the questions that focussed specifically on exchange or non-exchange participants in TP 2.

3.2.6. Non-participation in exchange trading in TP 2

In the survey, the installation operators who have refrained from participating in exchange trading in TP 2 were first asked about their motives for this decision (see Section 3.2.6.1). In addition, they were questioned about their in-house systems, how long it took to administer and the cost of organising trading (see Section 3.2.6.2) as well as the conditions of trading via intermediaries in TP 2 (see Sections 3.2.6.3 to 3.2.6.5).

3.2.6.1 Overview and reasons for non-participation in exchange trading in TP 2

114 companies said that they have been non-trading members in an emissions exchange or emissions trading platform in TP 2. This was 89 percent and the vast majority of the 128 companies that provided this information. As Figure 14 below shows, the reasons for non-participation in exchange trading are many and varied.



Source: Ecologic Institute

Figure 14: Reasons for non-participation in exchange trading in TP 2

In the first place there was no purchase need in TP 2 for a large number of companies. This fact is also reflected by the information provided by 29 percent of the companies explaining that they had no significant purchase or sale need for emission allowances, which was the most common reason **for non-participation**. The opportunity for group internal offsetting with a share of nine percent was another reason for not using the exchange market trading, which is initially not directly attributed to perceived market access barriers. **Around 40 percent of the companies justified their non-participation in TP 2 exchange trading by the fact that essentially there was no need for an external market access.**

In contrast, another 40 percent of the companies justified their abandonment of exchange trading in TP 2 with particular entry barriers. 21 percent of companies consider the administrative requirements of the exchange to be too high. Twelve percent, i.e. a much lower number of companies justify their decision with the fact that the charges for exchange trading and the costs for the technical connection to the market are too high for them. Seven percent said that the amount of collateral to be deposited for the use of an emissions trading exchange was too high, thus it is a rather lesser ground for refusal of participation in the exchanges.

Furthermore, one company cited corporate legal reasons for non-participation. Another enterprise saw the reason within their own organisational structure. **About 19 percent of the companies also said that they consider the conditions of buying through an intermediary sufficiently attractive, compared to exchange trading.**

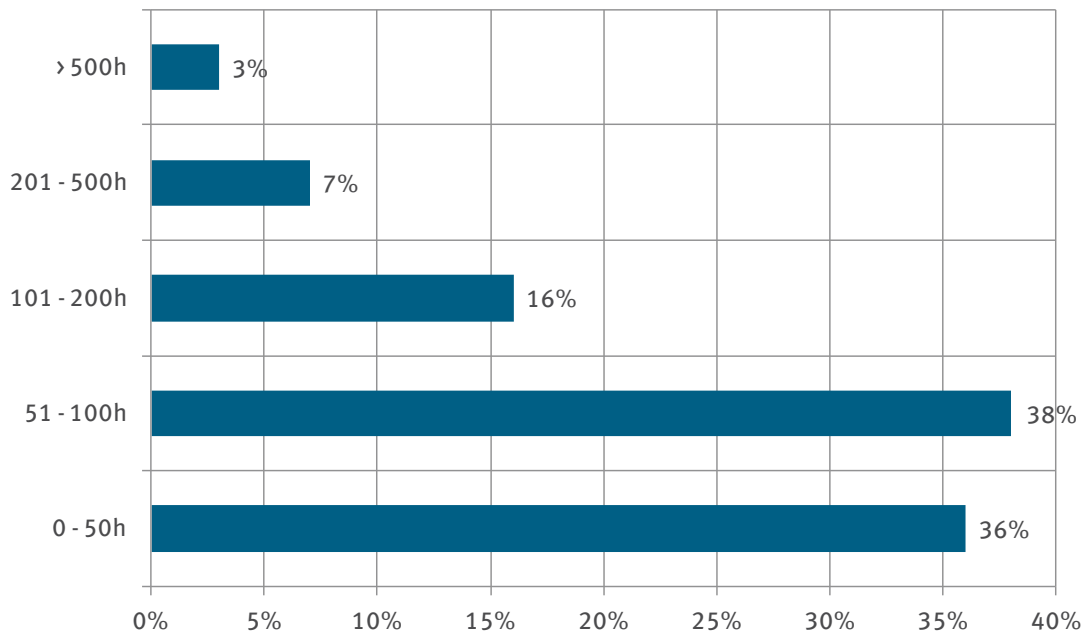
Overall, the admission to an emissions trading exchange for TP 3 represents is an option for only a very small proportion of companies. 92 percent still do not consider this for TP 3. All nine companies, six large and three SMEs, who are considering participation in the future, have a clear preference for EEX. Five of the nine companies envisage participation restricted to the EEX's carbon market (auctions and secondary trading) as a trading segment. One company wants to test a combined admission to carbon market and other markets and three companies prefer the exclusive license for auctions on the carbon market. Five of the nine companies expect a purchase demand greater than 100,000 tonnes in TP 3.

3.2.6.2 Internal administrative efforts and costs of trade for non-exchange participants in TP 2
In the survey, the in-house administrative workload and costs of organising the trade in TP 2 were collected. A distinction between cost and effort that are attributable solely to the purchase or sale may not have been possible for the respondents at a reasonable cost. Therefore, a corresponding differentiation was omitted in the survey. The collective effort and cost data cannot be placed in a direct relationship with the available data on the volume of the purchases as they refer to the organisation of the entire trade.

For 80 companies, and thus the large majority or about 73 percent of the 109 non-exchange respondents, the estimated administrative workload for organising the trade in TP 2 was an annual average of less than 100 hours per year. One-thirds of the 39 companies (36 percent) that had a low annual expenditure of less than 50 hours, had no purchase need in TP 2. The workload incurred may therefore be attributable to either sales transactions or merely maintaining market access. However, about 80 percent of these companies without purchase needs expect to have purchase needs in TP 3. For 17 percent of the respondents, the internal efforts were within an annual average time frame of 101-200 hours.

Only relatively few non-exchange participants (ten percent) reported annual efforts in excess of 200 hours per year for TP 2. For three companies, this effort was an excessively high range of more than 500 hours. Among these there are an SME and two major companies involved in emissions trading since 2008. All three of these companies took part in OTC trading in addition two of the three companies are also using intermediaries. Furthermore, two of these companies can envisage participating in exchange trading in the future. A future participation in exchange trading seems in particular to be interesting for such companies where the current process load is already very high.

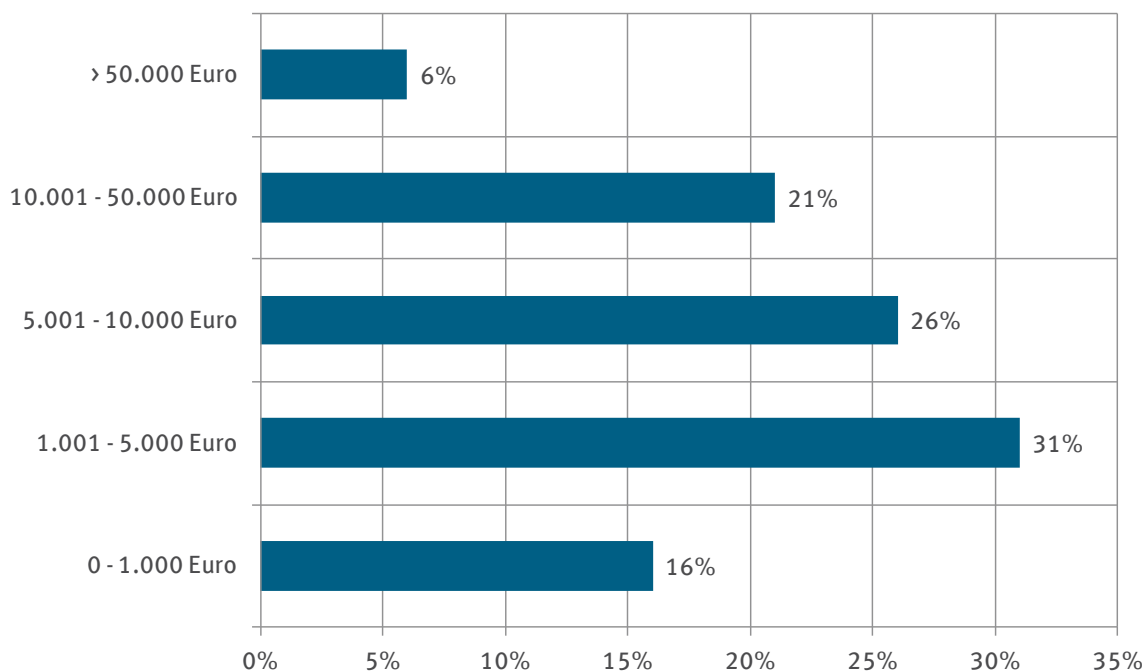
Figure 15 below summarises the data of non-exchange participants about their estimated administrative workload for organising trading in TP 2 based on annual averages.



Source: Ecologic Institute

Figure 15: Estimated internal administrative workload of trading for non-exchange participants in TP 2 (annual average)

In addition to the measured workload, Figure 16 below shows the associated administrative costs for the companies, based on annual averages in TP 2. Fees and charges that are incurred while trading with external third parties (e.g. intermediaries) were separately collected and are not included in the following values (see Section 3.2.6.3).



Source: Ecologic Institute

Figure 16: Estimated internal administrative costs of trading for non-exchange participants in TP 2 (annual average)

For most of the non-exchange participants (73 percent) the internal administrative costs for organising trading in TP 2 were on average less than 10,000 euros annually. The costs are even under 5,000 euros a year for 47 percent of the companies. 88 percent of the companies with very low cost below 5,000 euros also had zero or minor purchase needs of less than 10,000 tonnes. About 16 percent of the companies estimate their average administrative costs for TP 2 at even less than 1,000 euros per year. For these companies, the time required was less than 100 hours, 82 percent indicate workload to be less than 50 hours. For 91 percent of the 33 companies who estimated their costs at 1,001-5,000 euros, the annual time and effort was up to 100 hours.

43 percent of non-exchange participants, that indicated relatively high internal administrative costs of more than 10,000 euros, had no purchase need in TP 2. Here, too, it can be assumed that the costs incurred are attributable to sales transactions.

Only six percent of non-exchange participants quantify their internal administrative costs for the organisation of trading in TP 2 on an annual average at more than 50,000 euros. For all companies with costs of more than 50,000 euros, the workload was at about 100 hours. Two of these companies invested more than 500 hours in the organisation of trading. The purchase need looks very different for these companies. Two companies have had no shortfalls, one company had shortfalls between 10,000 and 100,000 tonnes and two other companies between 100,001 and 500,000 tonnes. One of these companies did not report on its current purchase need. 83 percent of the companies with very high internal costs of more than 50,000 euros are considering an exchange membership for TP 3.

Thus the expected positive relationship between the estimated internal administrative workload and the internal administrative costs of non-exchange participants can be recognised. The volume of the actual purchase need of emission allowances in this context plays only a minor role since the costs and expenses collected relate to the total trade, i.e. including processing sales transactions. However, it is likely that the total trade volume of sale and purchase transactions is positively correlated with the administrative costs and expenses.

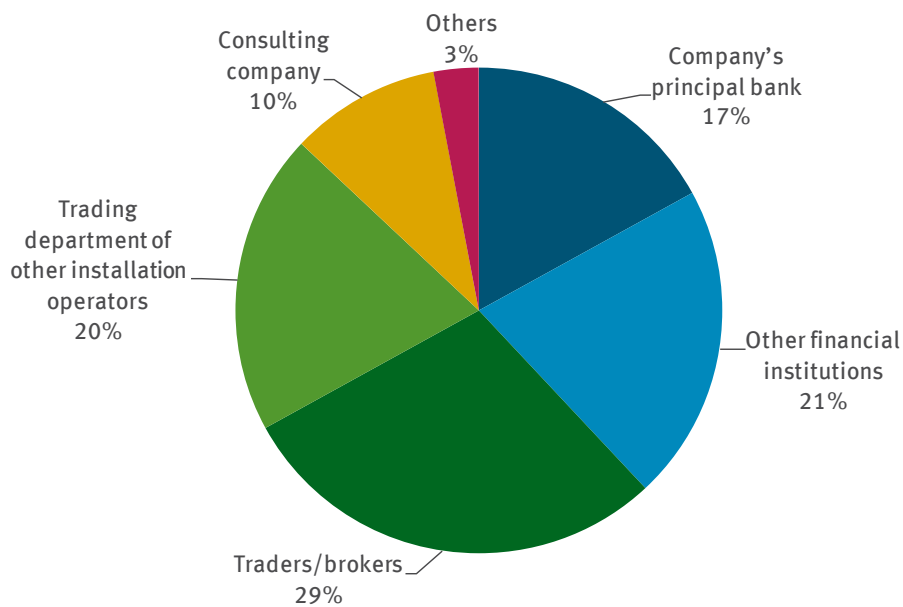
For the majority of the respondents that do not participate in exchange trading, the average costs for the organisation of trading in TP2 were within manageable limits. Approximately 94 percent used less than 50,000 euros on average annually. The workload involved was less than 500 hours for about 97 percent. Costs and expenses were below 10,000 euros or 100 hours, respectively, for about 73 percent of the companies.

3.2.6.3 Trade of non-exchange participants through intermediaries in TP 2 - Overview and motives

In the survey, companies not yet participating in exchange trading were also asked specific questions about their trade via intermediaries. Only 20 companies said they had not used intermediaries. A low overall purchase or sale need of emission allowances is indicated as the main cause. Overall, 16 of the 20 companies gave this reason. An internal company offsetting was possible for three companies. **Thus around 81 percent of the respondents without exchange access used an intermediary in TP 2.**¹³

Among the 88 companies that specified their information on intermediaries in detail, a dealer or broker in TP 2 was the most highly used type of intermediary at 29 percent (average usage). Figure 17 below shows that the use of other financial institutions and the trading department of another installation operator are almost the same: 21 percent and 20 percent. Only 17 percent of the installation operators use their company's principal bank, which is a rather subsidiary role. Consulting companies with only ten percent represent the lowest proportion (see Figure 17).

¹³ The number of 88 companies differs from the figures in Section 3.2.1 (Trading strategies) as some companies did not provide information about their trading strategy.

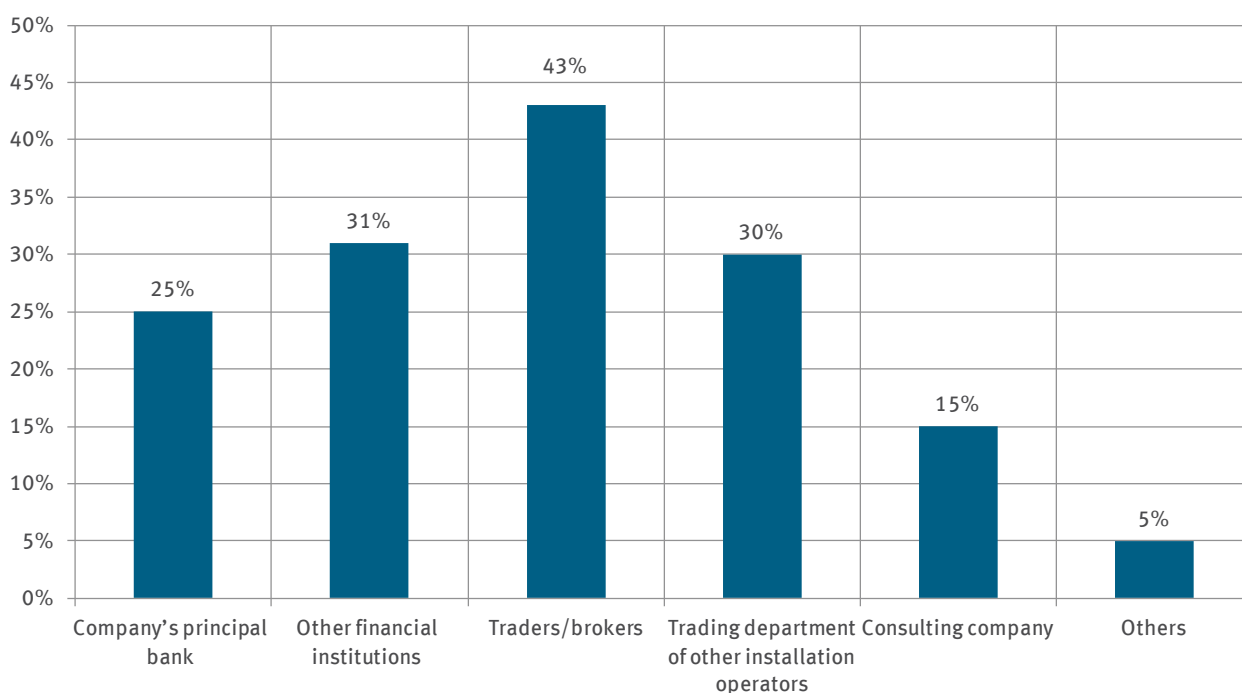


Source: Ecologic Institute

Figure 17: Average use of intermediaries for non-exchange participants in TP 2

A similar pattern for average utilisation emerges for TP 2 in terms of the general distribution of the different intermediaries among the non-exchange participants. Around 43 percent of companies reported that they conduct their trades at least partially through traders or brokers. About 31 percent used other banks or financial institutions, 30 percent of companies used the trading department of another installation operator and 25 percent used their company's principle bank. Consulting firms were used by 15 percent of the companies.

Overall, therefore, 75 percent of the responding non-exchange participants do not use their company's principle bank as an intermediary, but rather rely on specialised service providers for emissions trading. Figure 18 summarises the results for the relative frequency of intermediaries among non-exchange participants in TP 2.



Source: Ecologic Institute

Figure 18: Relative frequency of intermediaries among non-exchange participants in TP 2¹⁴

At 38 percent, more than a third of companies without exchange access use a variety of intermediaries for trading in TP 2.

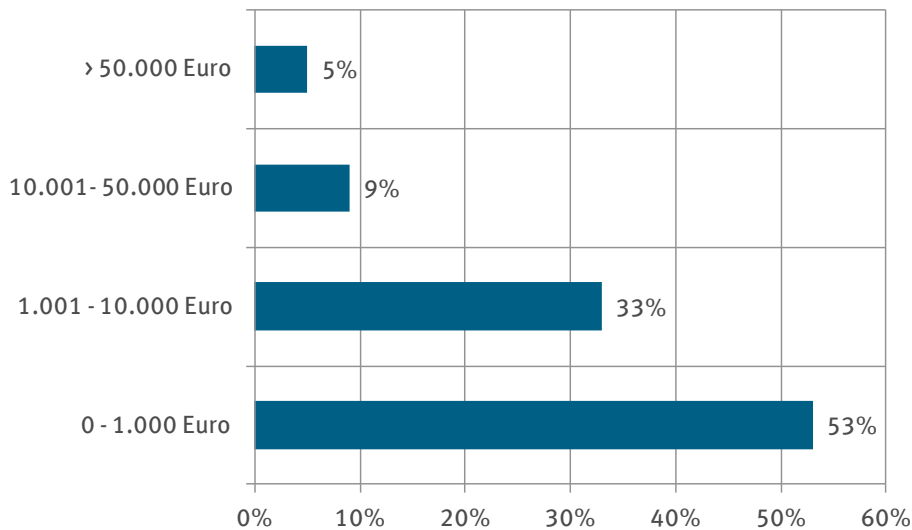
However, of the 88 companies, not one company had a fully diversified intermediary structure, using all five options on the questionnaire. A majority of the companies that use different intermediaries depended on two types (31 percent).

The vast majority (79 percent) of non-exchange participants stated that they did not provide specific details about their company's activities to the intermediary before signing a contract. Eleven percent presented supporting documents about the size of their liable equity capital or the amount of their annual turnover. Proof in the form of annual reports and balance sheets were also mentioned.

3.2.6.4 Non-exchange participants trading through intermediaries in TP 2 - fees and charges

As figure 19 shows, for 53 percent of the 85 non-exchange participants that provided information, the direct annual fees or charges from trading with intermediaries in TP 2 amounted to less than 1,000 euros, and for 86 percent, fees were less than 10,000 euros. The companies whose fees and charges were less than 1,000 euros, primarily used „other financial institutions“ for their trading. The allowance purchases of these companies with very low fees are most often in the range of up to 10,000 tonnes. Only twelve companies estimate their annual fees and charges to intermediaries to be more than 10,000 euros. However, the reason for this does not translate into a correspondingly higher amount of allowances purchased.

14 The sum of relative frequencies is greater than 100 percent because multiple answers were allowed.

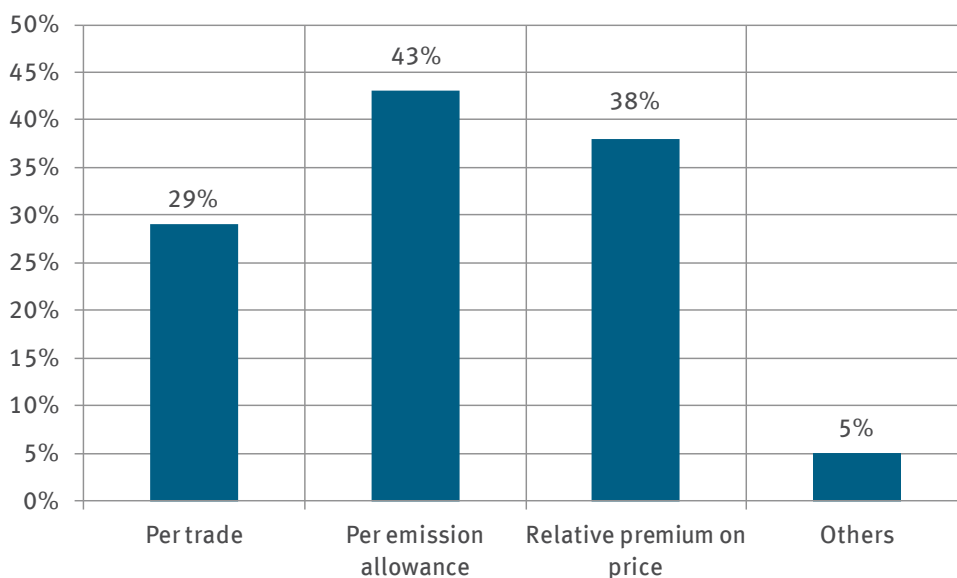


Source: Ecologic Institute

Figure 19: Amount of direct charges and fees for intermediaries for non-exchange participants in TP 2 (annual average)

For the most part, billing from intermediaries included one the following tariff components: (1) as a fixed cost per executed trade contract, (2) a fee per emission allowance and (3) as a relative premium on the purchase price. Some companies stated that their billing method was a combination of the three methods. This can be explained by the fact that there were companies that used different types of intermediaries in TP 2, or had agreed on a blended tariff with their intermediary.

The relative frequency of the three billing methods is comparatively equally distributed among the responding companies. But, at 43 percent, charging as a fee per emission allowance was the most widespread method in TP 2. It was followed by a relative premium on the purchase price at 38 percent, and the fixed fee per trade at 29 percent. Figure 20 summarises the results.



Source: Ecologic Institute

Figure 20: Relative frequency of billing rates from intermediaries in TP 2¹⁵

For the 27 companies that provided specific information about fees, it was found that if there was a fee per emission allowance, then it ranged between 10 and 150 euros (per 1,000 EUA). Based on the average price of an emission allowance in TP 2 of around 14 euros, these charges and fees amounted to between 0.07 and 1.02 percent. Most often, the fees per 1,000 EUA were between 10 and 50 euros - rather low costs for businesses relative to the actual purchase price.

However, if billing as a relative premium on the purchase price is used, 95 per cent of the 20 companies affected had to pay between one percent and five percent. Most often though, for two-thirds of companies, the premium was between one percent and two percent and therefore relatively small. However, based on the average price of an EUA in TP 2 the premium on the purchase price tariff variant is slightly higher than in the previously mentioned charges per EUA.

Indeed, this ratio shifts at the current price of about 4.50 euros. In this case, fixed fees amount to 0.22 to 3.33 percent of the purchase price. Whether fixed fee billing per 1,000 EUA is cheaper than the relative premium on the purchase price therefore depends on current prices on the carbon market.

In the case of fixed costs for each executed trade, costs were in a range of between one and five euros for 47 percent of the 19 companies concerned. It is noteworthy that 78 percent of companies with these very low fixed costs did not mention any additional billing methods for TP 2. However, 26 percent of the companies also indicated fixed costs of more than 100 euros. On closer examination of these companies, it becomes clear that most of them have purchased more than 100,000 tonnes, transacted without exception via a trader or broker. From this group of companies with high fixed costs, each one would consider a seat on an emissions trading exchange in TP 3. In view of the fact that a very large number of companies do not take this step into consideration, this is remarkable.

¹⁵ The sum of relative frequencies is greater than 100 percent because multiple answers were allowed.

3.2.6.5 Total costs of trading for non-exchange participants in TP 2

For most of the respondents (73 percent) who did not participate in exchange trading in TP 2, the average annual internal administrative cost for organising trading was lower than 10,000 euros. In addition, for approximately 86 percent of the respondents, the direct fees and charges from intermediaries also amounted to less than 10,000 euros. 96 percent of the companies did not have to furnish additional collateral above and beyond the fees and charges to the respective intermediaries. With around 79 percent, the vast majority of companies indicated that they did not have to provide any specific documentation about the company's activities to the intermediary before signing a contract. **For the majority of the responding non-exchange participants, the annual average cost of trading in TP 2 was in a range of less than 20,000 euros.**

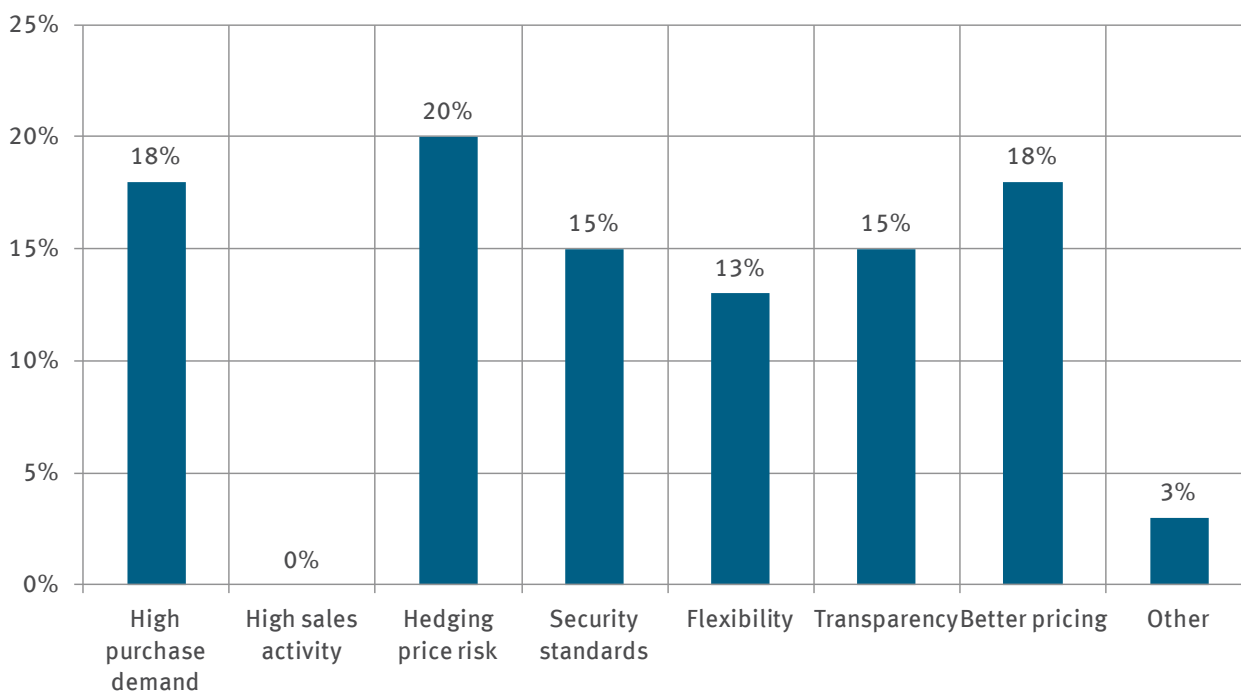
3.2.7. Exchange participants in TP 2

3.2.7.1 Overview and reasons for trading on the exchange in TP 2

A total of 15 companies reported that they had a seat on an exchange in TP 2. Among them are two SMEs and 13 large companies that were subject to emissions trading since 2008. Only 13 percent, two of the 15 exchange participants, indicated that they focus exclusively on exchange trading and thereby pursued a singular trading strategy. However, amongst all responding installation operators, the share of companies with such a singular trading strategy stood at around 80 percent.

About half of the exchange participants (53 percent) indicated they did not have a shortfall in emission allowances in TP 2. There were several explanations for participating in exchange trading. On one hand, these companies may have used exchange access for sales transactions. However, this does not coincide with the motives listed by exchange participants in the following paragraph. Secondly, exchange access may have been set up as a pure prophylactic measure. However, this appears rather unlikely in light of the associated fixed costs. It is more likely therefore, that access to the carbon market is included in combination, at no extra cost, in a general market access to an energy and commodities exchange. This applies to many trading participants on the EEX.

20 percent of companies said that the strongest motivation for choosing exchange trading is the opportunity to hedge the price risk. Other reasons such as high purchase demand, price advantage due to low transaction costs, transparency, or security standards of the exchange are relatively evenly distributed overall. At 13 percent, the flexibility of exchange was the most uncommon reason. However, a high sales demand for emission allowances was not a key motivation for trading on the exchanges for any of the companies. Figure 21 summarises the results.



Source: Ecologic Institute

Figure 21: Reasons for trading on an exchange in TP 2

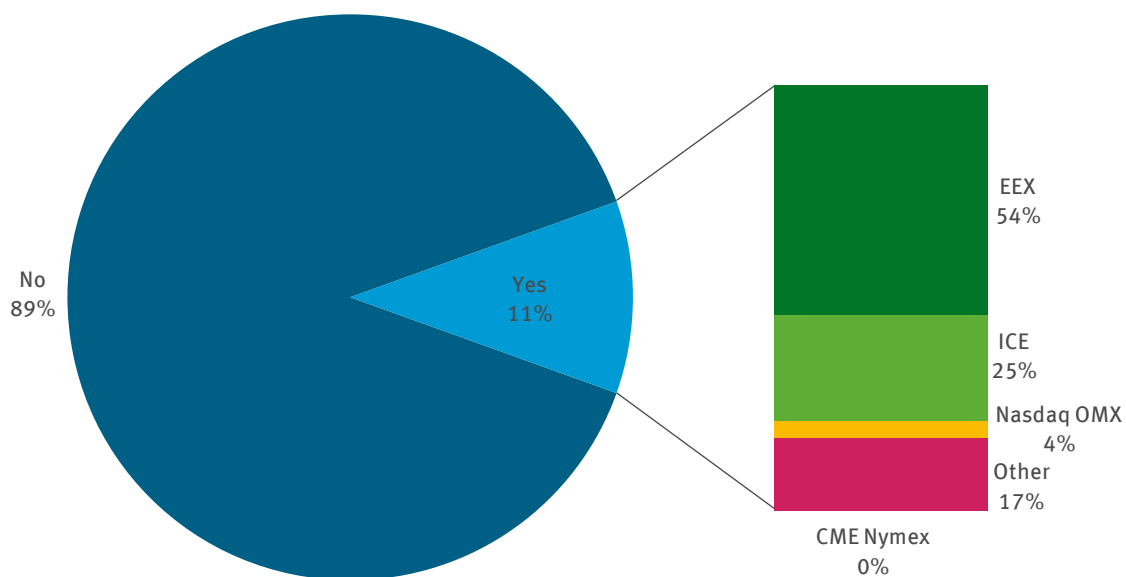
About two-thirds of exchange participants are considering a change in strategy for TP3. Among these are also companies who expect to have a high purchase need. Among exchange participants, 40 percent want to focus more on intermediaries in the future. Future coverage of demand through auctions, the secondary market and the OTC market are on par with respective shares of 20 percent.

Overall, five of the exchange participants have already participated in an auction of emission allowances.¹⁶ The five participants also stated their motives. One company explained this decision by favouring the uncomplicated process, another expected lower prices than in secondary market trading. However, three of the five exchange participants with auction experience also indicated that they were merely testing auction trade.

In contrast, there were eight exchange participants who have not yet participated in auctions. Two of these companies considered the auction process too complicated. For four companies, the non-participation was based on internal company reasons. Another company indicated that secondary market trading has no cost disadvantages, and yet another exchange participant stated that important legal questions for auction admission have not yet been sufficiently clarified.

Figure 22 shows an overview of the different emissions trading exchanges on which installation operators were licensed in TP 2. The largest number of exchange participants, i.e. 54 percent, have a seat on the EEX, followed by 25 percent on the ICE and 4 percent on the Nasdaq OMX. Other exchanges account for 17 percent. None of the respondents reported trading on the CME Nymex.

¹⁶ The number of companies differs from the response given to trading strategy, as some companies did not provide information about trading strategy.



Source: Ecologic Institute

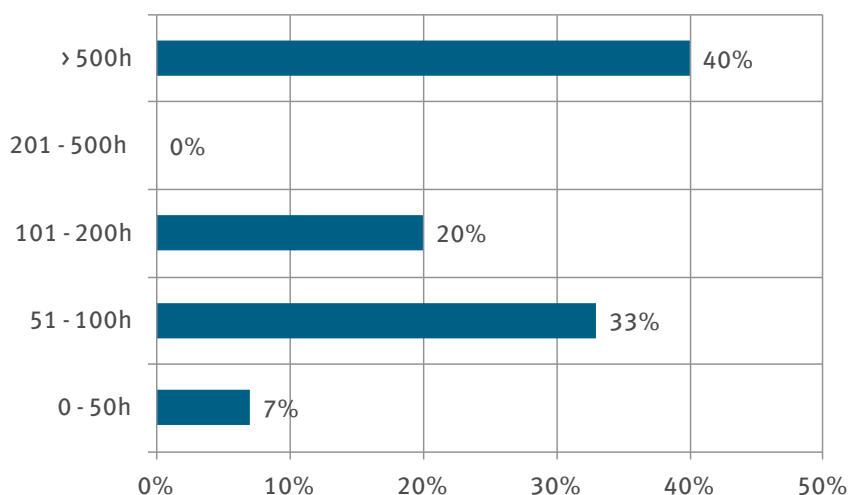
Figure 22: Share of exchange participants among installation operators in TP 2 and frequency distribution of the chosen emissions trading exchanges / platforms

3.2.7.2 Internal administrative workload and costs of trading exchange participants in TP2

Figure 23 shows that exchange participants assess their internal workload for the organisation of trade in TP 2 very differently. While 40 percent of exchange participants saw an average annual workload of less than 100 hours, another 40 percent stated to have had a very heavy workload of more than 500 hours. For 20 percent, the workload was in a range between 101-200 hours.

By comparing the other companies that do not participate in exchange trading, the following pattern emerges: **among exchange participants, the share of companies with an annual workload of over 100 hours was about 60 percent and 26 percent for the other companies. For a workload above 500 hours, the ratio was even higher at 40 percent (exchange participants) to three percent (non-exchange participants).**

The six exchange participants who indicated their annual workload to be more than 500 hours in TP 2 are all large companies. Three of the six companies had a high purchase demand of more than 500,000 tonnes. These companies have no plans to change strategy for TP 3. The other three companies' purchase need was lower than that amount. Five of the six companies expect a very high purchase need of more than 1,000,000 tonnes for TP 3. One company, however, does not expect a future shortfall of emission allowances.



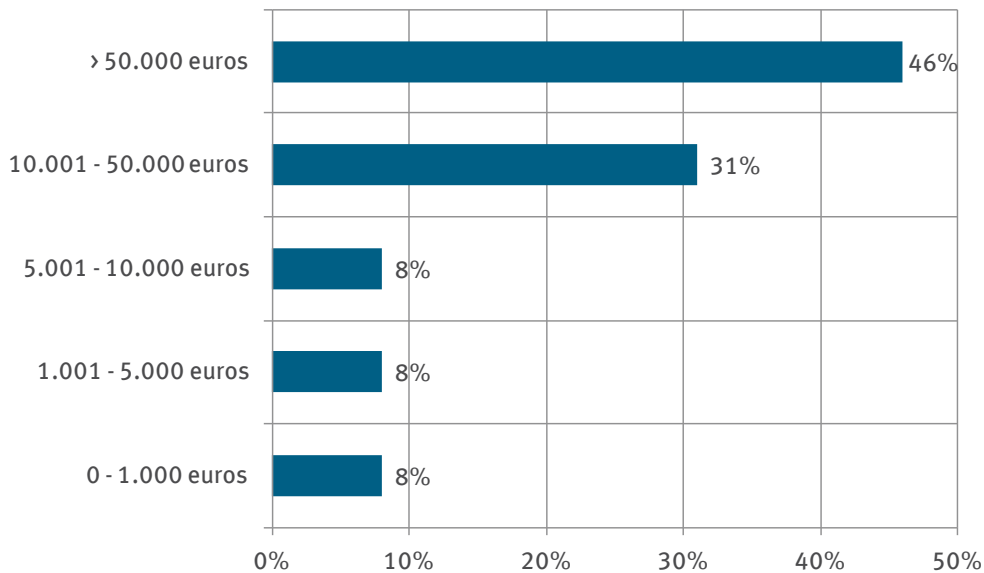
Source: Ecologic Institute

Figure 23: Level of the estimated internal administrative workload for exchange participants in TP 2 (annual average)

The six companies with an annual workload of less than 100 hours are two SMEs and four large companies, each of them having been exchange participants since 2008. In TP 2, four of the six companies did not need to make purchases, one only needed to buy in the very low range of 1 to 10,000 tonnes, the other's demand was between 10,001-100,000 tonnes. All six companies that have so far traded at a low level expect shortfalls of emission allowances in TP 3. Three of these companies expect their demand to be very high, in a range above 1,000,000 tonnes. **Two out of three exchange participants with a very high anticipated purchase need in TP 3 are not thinking of changing their strategy, which emphasises the attractiveness of exchange trading for high purchase need levels.**

In view of the expected high demand from the companies with a previously low workload (low activity), and their readiness to stick with exchange trading, it is likely that the annual workload for these companies will be at least 100 hours in TP 3. **Four of the six companies with low exchange trading activity plan to adjust their future compliance strategy in TP 3 in favour of intermediaries.**

In addition to the workload associated with trading, Figure 24 shows the annual average costs for exchange participants in TP 2. Among 77 percent of companies, average annual costs were above 10,000 euros, and over 50,000 euros for 46 percent of companies. Only three of the exchange participants indicated their annual costs were lower than 10,000 euros. **For the vast majority of exchange participants, the estimated annual administrative costs were in a very high range in TP 2.**



Source: Ecologic Institute

Figure 24: Amount of estimated internal administrative costs of trading for exchange participants in TP 2 (annual average)

A comparison with the companies who did not participate in exchange trading shows the following: among exchange participants, the proportion of companies whose annual costs for organising trade was in excess of 10,000 euros was about 77 percent, for the other companies it was 27 percent. For administrative costs in excess of 50,000 euros, the ratio was even higher at 46 percent (exchange participants) to 6 percent (non-exchange participants).

3.2.7.3 Use of clearing banks by exchange participants in TP 2

A total of eight companies explicitly specified that an intermediary bank, called a clearing bank, was needed for them to participate in exchange-trading. Five of these eight companies provided more detailed information in this regard. Three companies estimated the direct charges and fees for trading via clearing banks to be less than 10,000 euros per year. For one company such fees were 10,001-50,000 euros and another indicated a range of 100,001-150,000 euros.

For one of the exchange participants, the clearing bank billed them strictly per trade executed and charged a fixed fee of between six and 20 euros. For three of the five companies, however, costs were incurred in the form of a variable charge per traded emission allowance. One company estimated that fee at over ten euros per 1,000 EUA. **This clearing fee is roughly equivalent to the fee amounts that have been paid by non-exchange participants to their intermediaries in TP 2.**

For three of the companies, the collateral deposits to the clearing bank were mainly in the form of cash with a daily adjustment and in an amount calculated as a relative premium on the purchase price. There was no indication made as to the level of the premium. **All companies state unequivocally that the search for, or the contract negotiations with the clearing bank, did not constitute a significant barrier to entry for trading on the exchange. However, due to the very low number of cases, no general conclusions can be drawn from this data.**

3.2.7.4 Total trading burden for exchange participants in TP 2

The six market participants who reported their annual costs in TP 2 to be more than 50,000 euros, are the same companies that indicated their internal administrative workload to be more than 500 hours per year. **Three of these six exchange participants with very high annual internal costs of more than 50,000 euros indicated that the fees or charges paid to the exchange were also in a range above 50,000 euros per year in TP 2.**

For two of the six companies with very high internal administrative costs, the estimated exchange fees were between 10,001-50,000 euros. Only one company indicated a range below 1,000 euros. Overall 40 percent of exchange participants indicated that their fees or charges to be paid to the exchange were below 1,000 euros. For 30 percent of participants, respectively, these fees were between 10,001-50,000 euros or in the very high range of more than 50,000 euros. None of the companies claimed to have paid fees and charges between 1,000 to 10,000 euros. **Therefore, for some trading participants the total costs of internal company processes for administering trade plus the direct exchange fees exceeded 100,000 euros per year in TP 2, not including any fees and charges for clearing banks.**¹⁷

For the exchange participants who indicated their annual workload in TP 2 as less than 200 hours, the annual administrative costs were also less than 50,000 Euros. For exchange participants, who indicated a very high workload of over 500 hours, the internal administrative costs were above 50,000 euros. **This suggests an expected positive correlation between the estimated internal administrative workload and internal administrative costs for exchange participants.**

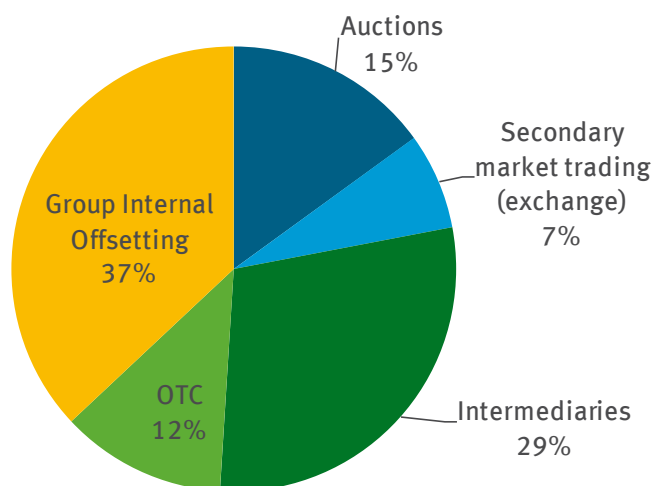
3.3 Companies Subject to Emissions Trading since TP 3

3.3.1. Overview of the strategic plans of new installation operators in TP 3

A total of 17 companies indicated that they will be subject to emissions trading starting from TP 3 (the „new installation operators“). A total of twelve of these companies provided concrete information about their planned purchase strategy for TP 3. In comparison, the response for TP 2 was 173 companies (hereinafter „established installation operators“). Of these, 95 companies provided information on their trading strategy. **Due to the very small number of cases where companies started participating in the EU ETS from 2013, the results in this section are primarily viewed in proportion to the TP 2 results.**

Figure 25 shows that, averaged over the twelve new installation operators, only seven percent of acquisitions are to be covered (average usage) via the participation in exchange-based secondary market trading. Another relatively small fraction of acquisitions will be via OTC trading, at twelve percent. **At 37 percent and 29 percent, group internal offsetting and the use of intermediaries are the most prevalent acquisition channels planned for new installation operators for TP 3.**

¹⁷ Only two companies provided information about the billing method of their respective exchange. For one company, billing is per executed trade. The other company pays a fee per tonne of CO₂ traded. The amount of the fee was not disclosed.



Source: Ecologic Institute

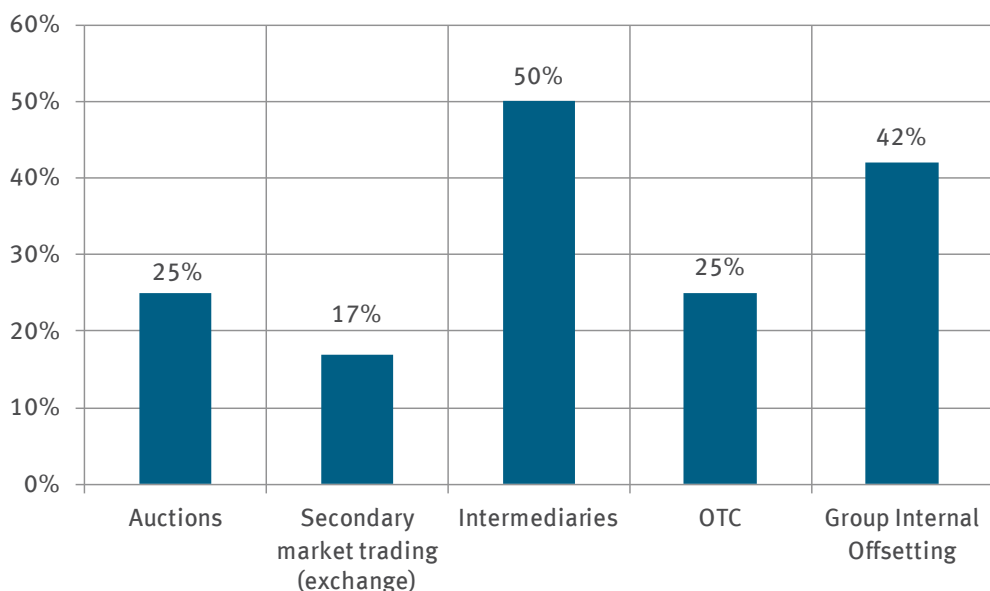
Figure 25: Expected average use of acquisition channels by new installation operators in TP 3

3.3.2. Comparing the strategic planning of new installation operators for TP 3 with the results from TP 2

The acquisition strategy plans of companies that are about to start participating in the EU ETS in TP 3 match relatively good with the analysis results for the large group of companies that have participated since TP 2, despite the small number of cases. With the established installation operators, the averaged proportion of their internal offsetting utilisation was 38 percent (37 percent for new installation operators). The access via intermediaries accounted for 37 percent for established installation operators (29 percent for new installation operators). OTC trade, exchange-based secondary market and auction participation followed with 16 percent, six percent and three percent, respectively, for established installation operators (twelve percent, seven percent and 15 percent for new installation operators).

It should be remembered in connection with this comparison that 42 percent of established installation operators plan to adjust their acquisition strategy in TP 3. It can therefore be concluded that the importance of trading via intermediaries, auction participation and OTC trading will increase. At 15 percent, the new installation operators' share of auctions appears relatively high. Nevertheless it coincides, at least qualitatively, with the data from established installation operators. When they stated their need to adapt, 20 percent of companies said they would increasingly use this market access.

A similar picture emerges with regard to replies about the relative frequency of the individual purchase channels among established and new installation operators. 50 percent of all new installation operators plan to cover their purchase need, at least partially, via intermediaries (45 percent of established installation operators). 42 percent want to use group internal offsetting (38 percent of established installation operators). 25 percent stated that they intend to participate in auctions and another 25 percent in OTC trading (three percent and 26 percent for established installation operators). The planned relative frequency is 17 percent for secondary trading (twelve percent for established installation operators). The figure below shows the results for the relative frequency of purchase channels among new installation operators.



Source: Ecologic Institute

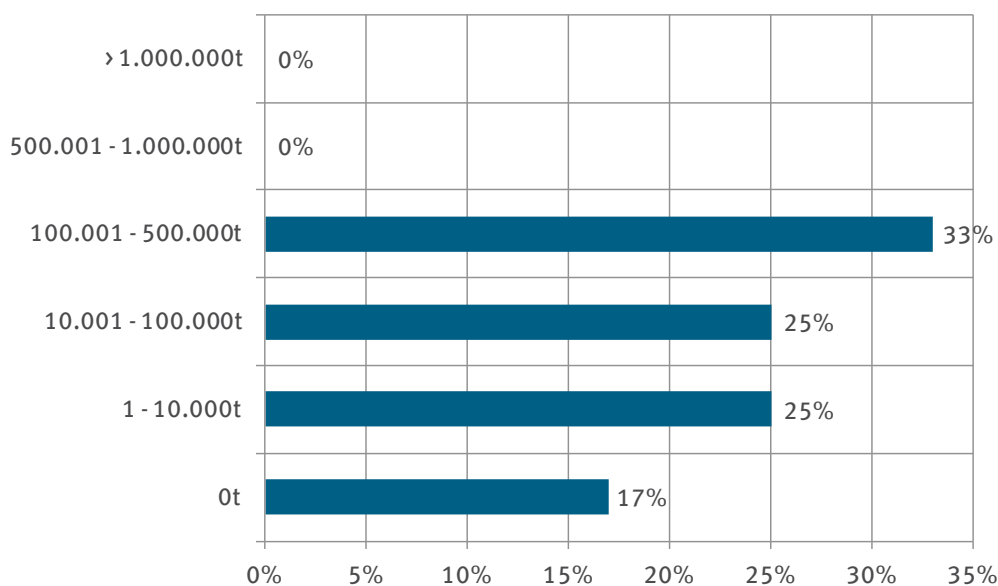
Figure 26: Expected relative frequency of purchase channels among new installation operators in TP 3¹⁸

3.3.3. Purchase strategy plans and expected purchase demand for new installation operators for TP 3

56 percent or twelve of the new installation operators that provided detailed information indicated the workload or cost minimisation as the most frequent reason for a particular chosen strategy. The next group, i.e. 25 percent, specified the development of a strategic potential as the driver. Risk diversification appeared less significant as the strategy of choice for companies (only 19 percent).

Figure 27 shows the cumulative purchase demand for TP 3 emission allowances as estimated by the new installation operators. Five companies expect none or only a very small shortfall of emission allowances: less than 10,000 tonnes, constituting a share of 42 percent. **None of the new operators expect a high demand of over 500,000 tonnes for TP 3.**

18 The sum of the percentages is greater than 100 percent because of multiple responses.



Source: Ecologic Institute

Figure 27: Expected purchase demand for emission allowances of new installation operators in TP 3 (in tonnes)

67 percent of the new installation operators indicate an expected purchase demand of less than 100,000 tonnes, 33 percent of the companies expect a shortfall between 100,001 and 500,000 tonnes. **The expected purchase demand of new installation operators in TP 3 cannot be specified in greater detail here, in view of the small number of respondents (twelve).**

3.3.4. Non-exchange participants among the new installation operators

Eleven out of 17 new installation operators say that they have so far not been trading members of an emissions trading exchange or emissions trading platform. They are also all of the companies who provided information on this issue. Three companies that have already participated in auctions and secondary trading have given no further information about the trading venues, workload and cost. Thus no company has specified to which emissions trading market it belongs.

The reasons for non-participation in the exchange trading among the new installation operators are varied and not attributable to only one main cause. First, the companies perceive the administrative requirements on the stock exchange too high.

17 percent of the companies indicated four reasons for their non-participation:

1. There is no significant purchase or sale need.
2. Corporate internal offsetting is possible.
3. The conditions of the intermediaries are sufficiently attractive.
4. The fees for trading and technical access to the exchange are too high.

Eleven percent of the companies, i.e. a small proportion, justify their decision by stating that the collateral required for exchange trading in the form of a deposit is too high.

None of the new operators consider future admission to a TP 3 emissions trading exchange an option. An evaluation of the exchange participants among the new installation operators has therefore been dropped, since none of the respondents clearly wanted to be accredited on an exchange.

3.3.4.1 Administrative workload and cost of new installation operators' trading

The monthly workload for nine out of ten new installation operators that provided internal administrative workload data on organising trading, is between zero and five hours. One company indicated a monthly workload of six to ten hours.¹⁹ **Overall, the companies considered the current administrative workload to be small.**

The monthly administrative cost for seven new installation operators i.e. for the majority of companies, is between 101 and 500 euros. Only two companies indicated a monthly administrative cost in the range of 501 to 1,000 euros. **All in all, the results of this section are consistent with those of established installation operators.**

3.3.4.2 Trade via intermediaries for new installation operators - fees and charges

The results in the following section with regard to intermediary trading are also consistent with the findings from established installation operators. The largest proportion, i.e. three companies out of the six new installation operators that have provided detailed data on intermediaries, prefer the trading department of another installation operator. Two companies use their company's principal bank, a dealer or broker, or a consulting company. Only one company has specified the use of other banks. This option seems to have only a minor attraction. Three companies indicated they did not use intermediaries. This is because the purchase or sale need for emission allowances was too low and also a group internal offsetting was possible.

All new installation operators explained that they did not provide any specific evidence about their own business before signing a contract with an intermediary. The companies were not required to deposit additional collateral for the respective intermediaries either, apart from the fees and charges.

The estimated monthly direct fees or charges from trading with intermediaries were under 500 euros for the majority (five) of new installation operators involved in intermediary trading. One company estimated their monthly direct fees and charges at 501-1,000 euros; they only used a dealer or broker.

Five of the six new installation operators involved in intermediary trading paid the intermediaries in the form of a relative premium to the purchase price, which was between one and five percent. Only one company indicated they had a fixed cost per trading order executed of between six and 20 euros. This company has used both the company's bank and a dealer or broker.

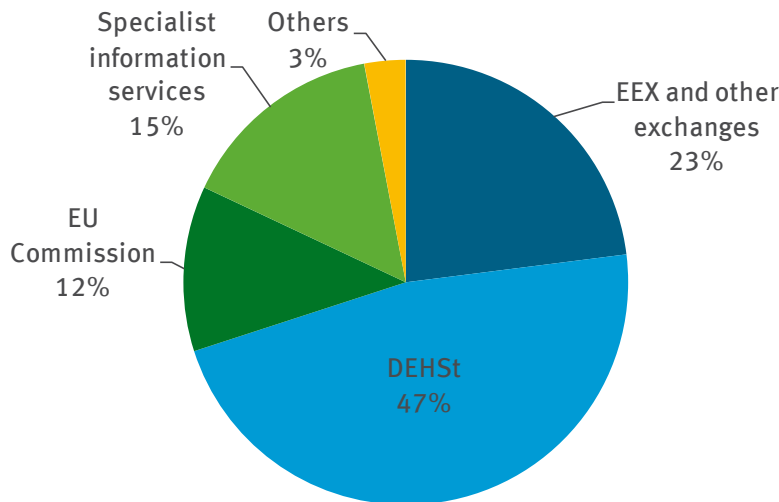
3.4 Information Status and Sources for Auctioning

In the survey, all companies were asked about how informed they felt and their sources of information related to auctioning in the EU ETS. In total, 127 companies were involved in these questions.

¹⁹ Monthly values were intentionally queried from installation operators since they, in contrast to established installation operators, cannot yet fall back on annual values.

3.4.1. Information sources with regard to auctioning

With 47 percent of the companies, DEHSt is the most frequent source of information related to auctioning. EEX and other exchanges follow: they are used by 23 percent of the companies to obtain information. The European Commission or specialist services such as Point Carbon, with a share of twelve percent and 15 percent respectively, were used rather infrequently. Some companies have obtained their information from various newsletters of law firms, brokers, associations or consulting companies. Figure 28 below shows the results.

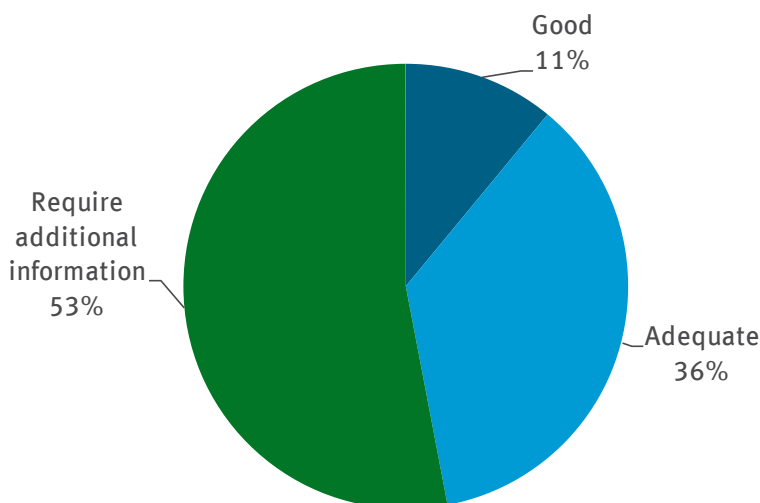


Source: Ecologic Institute

Figure 28: Information sources on the topic of auctioning among all respondents

3.4.2. How informed companies are on auctioning

Figure 29 below shows that only eleven percent of the 127 respondents feel well informed about auctioning. Another 36 percent say they feel that their level of information is adequate. Slightly more than half of the companies do not feel sufficiently informed about auctions. There is therefore a need for additional information in this respect.



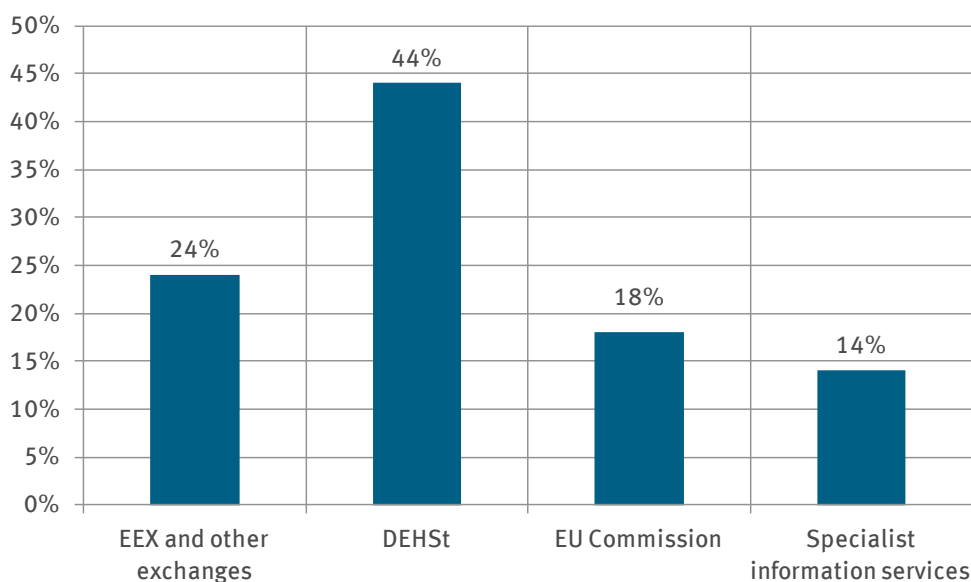
Source: Ecologic Institute

Figure 29: Information status about auctioning among all those interviewed

44 percent of the 94 companies that have provided detailed data wish to receive more frequent additional information from DEHSt. As the figure below shows, this is the highest preference. All companies that feel well-informed about auctioning in emissions trading say they have obtained information from EEX or other exchanges. A large number of companies, 92 percent, also mention DEHSt as one of their main sources of information.

The advantages of the „Auction Only“ membership to participate in the primary auctions at the Leipzig EEX Energy Exchange are known only to 15 percent of the companies surveyed. 95 percent of these companies obtain their general information from DEHSt among others. EEX or other exchanges are a source of information for 84 percent. 85 percent, i.e. the largest part of the surveyed companies, perceive a further information need with regard to „Auction Only.“

DEHSt is the first point of contact for additional information for 40 percent of the companies that state not having been sufficiently informed about auctioning. 24 percent of the respondents obtain additional information about auctioning from EEX and other exchanges, followed by the EU Commission and specialist information services, with 18 percent and 14 percent, respectively. Figure 30 below summarises the results.



Source: Ecologic Institute

Figure 30: Frequency distribution of preferred sources for additional information

3.4.3. Conclusions about the status of auctioning information

Summing up, it can be seen that the companies currently trust their sources of information, as they seek more information from these same sources. Both DEHSt and EEX or other exchanges represent the company’s principal sources of information regarding open questions about auctioning. However, a large number of companies require additional information. This information need will be directed towards DEHSt and EEX, or other exchanges.

4 Review and Outlook

235 of 995 of operators of German installations contacted participated in the survey. Thereof, the data provided by 196 installation operators were suitable for the present investigation. **This corresponds to a 20-percent response rate, which can be assessed as very positive, and indicates the high significance of the topic for the installation operators surveyed.**

The aim of the survey was to provide a comprehensive overview of strategic considerations and actual activities of installation operators in relation to their chosen market access channels to obtain emission allowances. The focus was particularly directed toward a segmented analysis of SMEs and large companies, as well as of the conditions for participating in the primary or secondary market. **The survey's evaluation provided important insights. One of which was that the selected acquisition strategy in TP 2 chiefly depended on the amount of the purchase volume, and only in a subsidiary way on the company's size.**

The majority of German installation operators are not yet active on the exchange, but are trading with a small amount of emission allowances in direct contact with intermediaries. This option for the installation operators is accompanied by a low workload, low internal administrative cost and low fees and charges. **This report can provide important practical findings, especially in terms of the actual workload on installation operators due to trade organising. Additionally this report provides practical findings on the fee and charging structures of intermediaries.**

Strategic considerations with regard to possible trade options played no role for the companies in TP 2. This is conclusive in view of the low overall purchase demand. **Companies that purchased large amounts in TP 2 mainly used the OTC market, auctions and secondary trading on the exchange.**

The survey's results support the initial hypothesis that there will be a shift on the carbon market in TP 3, and that the importance of a cost-efficient organisation of trading will increase for many installation operators. Almost half of all respondents are planning to adjust their previous purchase portfolio in TP 3. This is primarily because many companies expect that initially they will have to buy. Their share among the surveyed companies clearly increases from 44 percent (TP 2) to 83 percent (TP 3).

In TP 2, only about half of the respondents have been active as buyers on the market so far. Only 13 percent of all companies had a high purchase need of about 100,000 tonnes, while only four percent had a very high need of more than 1,000,000 tonnes. Judging by the responses, the proportion of companies with a high purchase need (above 100,000 tonnes) would more than triple in TP3. The proportion of companies with a very high need in excess of 1,000,000 tonnes will show the strongest increase. About 18 percent of all companies will assume a correspondingly high purchase need in TP 3.

It becomes apparent that market access via intermediaries may be the most commonly used access channel by operators of German installations in the future. However, auctions and direct trade between the companies will also increase in importance. This development is likely to be due to the fact that, according to the respondents' data, the groups of installation operators with an average or with a very high purchase need will grow significantly in TP 3.

Unfortunately no representative results could be established about the actual workload of exchange members through the mandatory commissioning of clearing banks. This is not only due to the small number of cases, but also to the reticence of the respondents to provide relevant information. **Due to the expected increase in importance of the exchange segment (secondary trading and auctions), there is a further research need, particularly with regard to the conditions of clearing.**

A specific query about the terms of OTC trading was not included in the survey. The actual importance of this segment was simply underestimated in the preparation of the questionnaire. With respect to the aggregate TP 2 purchase demand of the respondents, this was the most important acquisition channel for 43 percent of companies. About one in four companies which is considering an adjustment to its acquisition strategy in TP 3, is planning to expand their activities in OTC trading. **The identification of OTC trading as one of the central acquisition channels can be characterised as one of the survey's unexpected results. A follow-up survey during the TP 3 should reflect on this result.**

In view of the expected growth in the auctions' importance, it must be noted that about 53 percent of all respondents feel they have not been given sufficient information about auctioning in the EU ETS so far. 44 percent of installation operators (the largest group) require additional information from DEHSt on this topic. Another 24 percent request additional information from EEX and other exchanges. The advantages of the „Auction Only“ membership for participating in primary auctions at the Leipzig EEX Energy Exchange have been hitherto known only to 15 percent of the companies surveyed. **A follow-up survey during TP 3 should examine to what extent the current lack of information among the operators of German installations could be reduced. In this context, it should also be queried as to where there are specific information gaps.**

In particular, the completion of the allocation process for TP 3, the submission of a draft by the EU Commission for the EU ETS's structural reform, the revision of the carbon leakage list and the proposed changes in financial market regulation will provide important impulses for a follow-up survey. **A follow-up survey should therefore review the expectations of installation operators in relation to their purchase demand in TP 3 and the associated implications on their purchase strategy.**

Annex

5 Overview for the Use of each Purchase Channel

Hereinafter the results on the use of each purchase channel will be separately shown for the two groups of established (since TP 2) and new (since TP 3) installation operators, and separately for each purchase channel.

5.1 Companies Subject to Emissions Trading since TP 2

5.1.1. Auctions (n=3)

Participation in auctions represented an option only for a minority of established installation operators in TP 2. The three companies who indicated direct participation in auctions are considered large companies.

Two of these companies said that they covered their total demand of up to 100 percent via auctions. One of the companies mentioned a small purchase demand under 10,000 tonnes (2008-2012), while the other company purchased 1,000,000 tonnes in the same period. An explanation for the large difference in purchase need of these two companies may be that the company with the very low purchase need has not participated in emissions trading since the beginning of TP 2 and simply has a lower demand because of this, whereas the other company has been an emission trading participant since 2008. A different company department with the low purchase need took this strategic decision, therefore there is no precise information available about the reasons. The third company bought about 30 percent of its demand on auctions, 55 percent by secondary trading, five percent through intermediaries and ten percent in direct trade with other companies. The total demand of this company for the 2008-2012 period was estimated to be between 500,000 tonnes and 1,000,000 tonnes. The reasons for these decisions are both risk diversification and expense or cost minimisation, and the development of a strategic potential (competence building etc.).

5.1.2. Secondary trading (n=11)

Eleven established installation operators indicated they have participated wholly or in part in secondary trading in TP 2. Two companies covered 100 percent, one 60 percent, one 55 percent, one 50 percent, one 40 percent, one 15 percent, two ten percent, and two other five percent of their compliance need. On average, the companies that participated in the secondary market used this channel with a share of 41 percent. Eleven companies have been subject to emissions trading since 2008, and eight of them are large companies. The purchase need was less than 100,000 tonnes for half of the companies. The other half reported that they have a total need of more than 100,000 tonnes, and this need exceeded 1,000,000 tonnes for two of the companies. Nine companies, i.e. the majority, indicated that expense or cost minimisation was in the foreground when they chose secondary trading. Six of the nine companies also chose this channel for risk diversification. Development of a strategic potential played a role for one company.

One of the two companies that covered their total purchase demand on the secondary market is a large company. The total need in the second trading period was 10,001-100,000 tonnes. This company indicated both risk diversification and expense and cost minimisation as reasons for its choice of strategy. The other company is an SME whose total need for this period was also between 10,001 and 100,000 tonnes. This company considers workload and cost minimisation as the reasons for participating in secondary trading.

The direct participation in exchange trading is relevant for only less than one in eight companies. Furthermore it should be noted that half of the companies only use this channel to a small extent, less than 50 percent.

5.1.3. Intermediaries (n=43)

43 established installation operators i.e. 45 percent of the respondents who reported on their trading strategies, managed to cover their purchase need in TP 2 wholly or partly via intermediaries. Access to banks or a dealer/broker provided the sole acquisition strategy for 27 of the 43 companies. Another five companies chose this channel at 50 percent. Four of the other companies chose this strategy with a share of between 50 and 100 percent, while the remaining seven companies did so with a share of between zero and 50 percent. The total purchase need here was about 100,000 tonnes for 16 percent of the companies. All 27 companies that chose this single acquisition channel have been subject to emissions trading since 2008. This makes up two-thirds of large companies in this case. None of the 27 companies indicated building up a strategic potential as justification for this chosen access, while workload and cost minimisation was the sole reason for 67 percent. There was a low purchase need of less than 10,000 tonnes in the second trading period for over half of the companies. Another eight companies indicated a purchase need of between 10,001 and 100,000 tonnes. One large company specified a purchase need of 100,001-500,000 tonnes, another large company had a total need in excess of 1,000,000 tonnes.

5.1.4. OTC (n=25)

25 established installation operators covered their TP 2 purchase needs fully or partially via direct trade with other companies. This channel was the sole trading strategy for eight companies. Ten companies chose this form of purchasing with a share less than 50 percent and seven companies chose the OTC trade in a proportion between 50 percent and 100 percent. 75 percent of large companies also chose this strategy. Twelve i.e. almost half of the companies, indicated a purchase need exceeding 100,000 tonnes. Building up a strategic potential was the reason for choosing this channel for 20 percent of the companies. 48 percent of the companies considered expense and cost minimisation as the sole reason for choosing this type of trading.

Those eight companies that exclusively chose this acquisition channel, i.e. 100 percent, have been subject to emissions trading since 2008. TP 2 purchase needs exceeded 100,000 tonnes for four, i.e. half, of these companies. One company indicated a purchase of 1,000,000 tonnes but gave no information about the motives for their choice.

5.1.5. Group internal offsetting (n=36)

36 established installation operators indicated they covered their purchase need within the company in the second trading period. 64 percent of them are large companies. The vast majority of 31 companies exclusively used this strategy. Only one company said they used this channel with a share less than 20 percent, and four companies used corporate internal offsetting in a range of between 50 percent and 100 percent. There was no or purchase need (or only a minor one) under 10,000 tonnes for 81 percent of the companies between 2008 and 2012. Only two of the 36 companies reported that they had a purchase need exceeding 100,000 tonnes. Expense or cost minimisation was the ground for the majority (64 percent) of the companies' decisions.

19 of the 31 companies that met their purchase need exclusively in-house stated they chosen this channel only for expense or cost minimisation reasons. Risk diversification was also one of the reasons for five companies.

None of the companies that covered 100 percent of their needs internally said they did this for the sake of developing a strategic potential.

5.2 Companies Subject to Emissions Trading since TP 3

5.2.1. Auctions (n=3)

Participation in auctions is an option in TP 3 for three of the twelve new installation operator respondents. One large company said their intention was to cover 100 percent of their need in TP 3 via auctions. This company however, initially expects no shortfall of emission allowances. Their reasoning for auction participation is to develop a strategic potential. The other two companies are SMEs that want to cover their needs partially via auctions. One of the companies plans to use auction trading at 50 percent and secondary trading at 50 percent. The other company wants to cover 25 percent of their need on auctions, 35 percent via secondary trading and about 40 percent through intermediaries. The purchase need is less than 10,000 tonnes for both companies. Workload and cost minimisation have been mentioned as justifications for participating in auction trading. Risk diversification was also relevant for one of the companies; the reason for the other one was to develop a strategic potential.

5.2.2. Secondary trading (n=2)

Two of the twelve new installation operator respondents envisage that they will also participate in secondary trading in TP 3. One company is planning to cover 35 percent and another one 50 percent of its compliance need via this strategy. Both companies are simultaneously also participating in auction trading. The purchase need for this company, as already mentioned in connection with the auctions, is between one and 10,000 tonnes.

5.2.3. Intermediaries (n=6)

Six of the twelve new installation operators i.e. 50 percent of the respondents that provided details about their trading strategies intend to cover their TP 3 purchase needs wholly or partly through intermediaries. The access route via banks or a dealer/broker represents 100 percent, i.e. an exclusive acquisition strategy, for two of the six companies. One of the other four companies intends to cover 80 percent of the purchase need via intermediaries, while the remaining three companies are planning 50 percent. The total expected purchase need exceeds 100,000 tonnes in the case of four companies. Only one company has a need between one and 10,000 tonnes. Four of the six companies reported that expense or cost minimisation is the sole reason for choosing this purchase channel.

5.2.4. OTC (n=3)

Three large new installation operators are planning to cover their purchase need in TP 3 whole or partially via direct trade with other companies. This channel is the sole trading strategy for one company, while the other two companies have chosen this form of purchase to cover less than 50 percent of their need. One of these companies is planning to meet the majority of their need through intermediaries, and their expected purchase need is between 100,001 and 500,000 tonnes. The other company prefers corporate internal offsetting. For the company that would like to meet their need exclusively via OTC trading, the expected TP 3 need is between 10,001 and 100,000 tonnes. Two of the three companies consider minimising their expense or cost as the sole reason for choosing this strategy.

5.2.5. Group internal offsetting (n=5)

Five of the twelve new installation operators indicated that they want to cover their TP 3 purchase need within the company. Three of them are large companies. The majority of the five companies are planning to use this strategy exclusively. Furthermore, one company plans to cover a high proportion, i.e. 90 percent, and another 50 percent via internal offsetting. Both companies want to meet their purchase need additionally via intermediaries. The purchase need of the three companies that want to exclusively cover their need within the company is expected to be within the range of zero to 100,000 tonnes. Expense or cost minimisation is at the forefront for the majority of companies when they choose their strategies. Two companies indicated, however, to have opted for this strategy solely for strategic reasons.

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