



# **State aid for indirect CO<sub>2</sub> costs of emissions trading (electricity price compensation) in Germany for 2013 and 2014**

**(EPC Report 2013/2014)**



## Impressum

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State aid for indirect carbon dioxide (CO<sub>2</sub>) costs related to emissions trading is intended to prevent the risk of shifting CO<sub>2</sub> emissions outside the European Union<sup>1</sup>. Application for aid can be subsequently submitted for an expired calendar year. The aid in arrears is supposed to compensate for a part of the indirect CO<sub>2</sub> costs of the preceding year. Applications for the 2013 accounting year could be made from 01/01/2014 to 30/05/2014, applications for the 2014 accounting year from 01/03/2015 to 01/06/2015 (differing from No. 5.3(1) of the funding guidelines, based on the Enforcement Decree of the Federal Ministry for Economic Affairs and Energy and the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety). This deadline was a cut-off deadline.

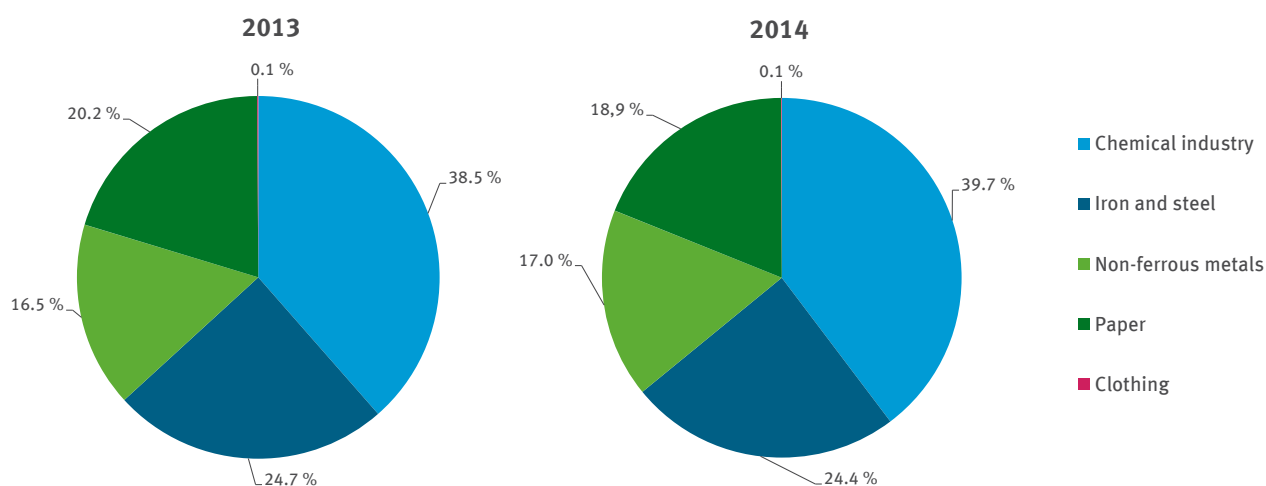
## 1 Results of the application process for electricity price compensation in 2013 and 2014 at a glance

For 2013, 358 applications were received. After examination, 340 undertakings with 970 installations received around 312 million euros aid. 349 undertakings requested electricity price compensation for 2014; of which the applications of 334 companies including 928 installations were approved. The approved aid amount for 2014 was 186 million euros. The EUA prices to be applied to the aid calculation (see explanations in Section 2, starting on page 5) were 7.94 euros in 2013 and 4.68 euros in 2014. Therefore, the total approved aid amount for 2014 turns out to be lower than for 2013. There are currently 21 non-completed processes due to appeals and complaints against aid decisions. Therefore, the final 2013 and 2014 aid amounts are not yet available.

The so-called difference carried forward was applied for the first time to determine the amount of aid under certain circumstances in the 2014 accounting year (see explanations in Section 2, starting on page 5). Therefore, the amount of aid for 2014 was slightly higher than the amount of aid that would have applied based exclusively on the accounting year's data without support from the difference carried forward from 2013. The difference carried forward for 2014 was about 600,000 euros.

56 undertakings benefited from this scheme due to the development of production and electricity consumption in 91 of their installations.

Undertakings in the chemical industry received 40 percent, which was the largest share of the compensation for 2014. This was followed by undertakings in the iron and steel industry receiving 24 percent, the paper industry with 19 percent and the non-ferrous metal industry with 17 percent (see Figure 1). The shares of the individual industries changed only slightly against the 2013 accounting year.



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Figure 1: Distribution of aid for electricity price compensation in 2013 and 2014 for individual industries

<sup>1</sup> Article 10a(6), Directive 2003/87/EC of 13.10.2003, as of 25/06/2009 (EC Emissions Trading Directive).

Out of the 928 (2013: 970) installations for which aid has been approved, 471 (2013: 476) are participating in the European Emissions Trading System (EU ETS). Their share of the aid is nearly 70 percent (see Table 3, page 13). Many installations do not fall within the scope of ETS, especially in the chemical and non-ferrous metals industries.

As a basis for the aid calculation in 2014, product-specific electricity consumption efficiency benchmarks (hereinafter called „benchmarks“) are slightly more important than the fall-back factor: 51 percent of the total aid results from the production of products for which a benchmark exists. 49 percent of the total aid results from the production of products where the fall-back factor is applied for their electricity consumption (see explanations in Section 2, starting on page 5) to determine the aid amount. In the 2013 accounting year, the fall-back factor had the higher percentage in the aid calculation (51 percent). The benchmarks chlorine (16 percent) and primary aluminium (12 percent), and the fall-back calculation elements of the sectors “Manufacture of paper and paperboard”<sup>2</sup> (15 percent) and „Manufacture of basic iron and steel and of ferro-alloys“<sup>3</sup> (10 percent) had the largest share of aid for the 2014 accounting year. Here, there were no changes in the ranking, but only slight changes in the shares against 2013.

In Section 2 of the report, general information concerning electricity price compensation is set out first. In Section 3, some assessment methods are described. Section 4 deals with the electricity price compensation at application level, that is, at the undertaking level. In addition, Section 5 contains assessments at the installation level. Section 6 includes assessments at the level of calculation elements. Section 7 contains an outlook of the electricity price compensation for the 2015 accounting year.

## 2 State aid for indirect CO<sub>2</sub> costs of the EU Emissions Trading Scheme

State aid for indirect CO<sub>2</sub> costs is intended to prevent the risk of shifting CO<sub>2</sub> emissions (so-called carbon leakage) to locations outside the geographical scope of the EU Emissions Trading Directive (EHRL)<sup>4</sup>. Indirect CO<sub>2</sub> costs may arise from the fact that electricity producers pass on the cost of emission allowances via the price of electricity to their customers. The aid is intended to compensate for some of these costs to undertakings in certain energy-intensive sectors and subsectors listed in Annex II of the EU State Aid Guidelines<sup>5</sup>. Thus, the aid is connected to the electricity consumption of installations. It does not matter whether the installations are covered by the emissions trading system or not. The basis for granting the aid is the State Aid Directive issued by the Federal Ministry of Economics and Technology (now: Federal Ministry for Economic Affairs and Energy)<sup>6</sup>.

The European Commission has identified those sectors and subsectors in which it sees such a risk of indirect carbon leakage. These sectors in particular include power-intensive production processes and are strongly exposed to international competition (see Table 1). Thus, it is the products manufactured by an undertaking that determine the eligibility. The assignment of an undertaking to a particular industry is not decisive.

Eligible applicants are undertakings whose installations manufacture products eligible for aid. Product-specific benchmarks exist for some of these eligible products according to Annex III of the EU State Aid Guidelines. They specify the electricity consumption in megawatt-hours per produced tonne of product to be considered in calculating the aid. In these cases the calculation of the aid depends on the quantity produced, which is given in tonnes of product (see No. 5.2.1 of the State Aid Directive). For products eligible for aid for which there is no benchmark, the aid depends on the electricity consumption for the production of these products (see No. 5.2.2 of the State Aid Directive).

2 Code 2112 according to NACE Rev. 1.1.

3 Code 2710 according to NACE Rev. 1.1.

4 Article 10a(6), Directive 2003/87/EC of 13/10/2003, as of 25/06/2009 (EC Emissions Trading Directive).

5 European Commission Guidelines on certain State aid measures in the context of the greenhouse gas emission allowance scheme post-2012 (Communication 2012/C 158/04, Official Journal of the European Union (OJ. EU) C 158, 05/06/2012, p. 4) amended by the Communication 2012/C 387/06 (OJ. EU C 387, 15/12/2012, p. 5), as corrected by the Communication 2013/C 82/07 (OJ. EU C 82, 21/03/2013, p. 9).

6 Directive for aid to undertakings in sectors and subsectors deemed to be exposed to a significant risk of carbon leakage due to EU ETS allowance costs passed on in electricity prices (aid for indirect CO<sub>2</sub> costs) of 23/07/2013, Official Part of the Bundesanzeiger (Federal Gazette AT) 06/08/2013 B2.

Electricity consumption will however be multiplied by a single fall-back electricity efficiency benchmark factor (hereinafter fall-back factor) of 0.8. For additional calculation, the products manufactured in an installation are combined to form so-called calculation elements. A calculation element includes products with an identical benchmark or – for fall-back products – those belonging to the same sector.

The German State Aid Directive for electricity price compensation stipulates that the CO<sub>2</sub> costs of one gigawatt-hour of electricity purchased per year per installation be subtracted from an undertaking's total aid amount. This retention is calculated from the price of the emission allowances to be applied (EUA price)<sup>7</sup> of 7.94 euros for 2013 and 4.68 euros for 2014 and a CO<sub>2</sub> emission factor of 0.76 tonnes of carbon dioxide per megawatt-hour. This results in CO<sub>2</sub> costs of 6,034.40 euros subtracted per installation for 2013 and 3,556.80 euros for 2014 for 1 gigawatt-hour of electricity purchased.

The so-called difference carried forward was applied for the first time in determining the aid amount under certain circumstances in the 2014 accounting year<sup>8</sup>. In principle, the aid shall be calculated based on the data of the accounting year. This is the general rule, however, it is limited by the aid that would have resulted from the baseline data from – 2005 to 2011. The aid amount was increased when the aid of an installation for the 2013 accounting year was limited by the basic data and when the aid for the 2014 accounting year based on that accounting year's data was below those of the baseline. In this case the increase, i.e. the difference carried forward, corresponds to the difference between the aid based on the 2013 data and the aid based on the baseline data. However, it can only go up to the level of the aid amount based on the baseline<sup>9</sup>.

## 3 Assessment methods

### 3.1 Combining sectors of industries

To make the analysis and assessment transparent, sectors and subsectors are combined into industries in this report (see Table 1). This enables an unambiguous assignment to industries at a calculation-element level (see Section 6). Each calculation element belongs precisely to one of the sectors and subsectors eligible for aid. At the undertaking level (see Section 4), the assignment usually depends on which sectors have the largest share of the aid amount. The assignment at the undertaking level was then transferred to that undertaking's installations (see Section 5).

**Table 1:** List of sectors and subsectors eligible for aid according to NACE Revision 1.1 (2007) in accordance with the EU State Aid Guidelines (Appendix II)

Sectors according to NACE <sup>10</sup> Revision 1.1	Identification	Industry
1310	Mining of iron ores	Iron and steel
1430	Mining of chemical and fertiliser minerals	Chemical industry
1711	Spinning of cotton-type fibres	Clothing
1810	Manufacture of leather clothes	
211114	Parts of the industry "Manufacture of pulp": mechanical pulp	Paper
2112	Manufacture of paper and paperboard	

<sup>7</sup> The EUA price to be applied for an accounting year is calculated from the previous year's average of daily trade closing bid prices of the reference contract. For the accounting years 2013 and 2014, this was the ICE futures for December delivery of each year (see No. 5.1 k) of the State Aid Directive).

<sup>8</sup> Difference carried forward in euro at installation level according to No. 5.2.1 (a) and (b) of the State Aid Directive in connection with No. 1 of the Decree of 27/12/2013.

<sup>9</sup> Cf. A guide to compiling applications for aid for indirect CO<sub>2</sub> costs (electricity price compensation), Section 3.5 aid limiting by the baseline and difference carried forward [https://www.strompreiskompensation.de/SPK/SharedDocs/downloads/handbuch\\_leitfaeden/SPK-Leitfaeden.pdf](https://www.strompreiskompensation.de/SPK/SharedDocs/downloads/handbuch_leitfaeden/SPK-Leitfaeden.pdf) (only in German)

<sup>10</sup> NACE (Nomenclature générale des activités économiques dans les Communautés Européennes) Rev. 1.1 is the Statistical Classification of Economic Activities in the European Community, published by Commission Regulation (EEC) No. 29/2002 of the Commission of 19/12/2001.

Sectors according to NACE <sup>10</sup> Revision 1.1	Identification	Industry
2413	Manufacture of other inorganic chemicals	Chemical industry
2414	Manufacture of other organic basic chemicals	
2415	Manufacture of fertilisers and nitrogen compounds	
2416 (Teile)	Parts of the industry "Manufacture of plastics in primary forms": <ul style="list-style-type: none"> <li>▶ 24161039 Low-density polyethylene (LDPE)</li> <li>▶ 24161035 Linear low-density polyethylene (LLDPE)</li> <li>▶ 24161050 High-density polyethylene (HDPE)</li> <li>▶ 24165130 Polypropylene (PP)</li> <li>▶ 24163010 Polyvinyl chloride (PVC)</li> <li>▶ 24164040 Polycarbonate (PC)</li> </ul>	
2470	Manufacture of man-made fibres	
2710	Manufacture of basic iron and steel and of ferro-alloys	Iron and steel
272210	Parts of the industry "Manufacture of steel pipes, steel tube fittings": seamless steel pipes	
2742	Aluminium production	Non-ferrous metals
2743	Lead, zinc and tin production	
2744	Copper production	

In Section 5.1, the installations are apportioned as to whether they are subject to emissions trading or not. The assignment to industries will continue to be oriented on the above and not on assignments that may have originated from emissions trading assessments.

### 3.2 Assignment of the amount of aid at the calculation-element level

The aid amount cannot be assigned to individual calculation elements without conversion because of the per-installation retention (see Section 2). The per-installation retention was therefore apportioned to the calculation elements of the installations.

## 4 Overview by undertakings

For 2013, a total of 358 applications for electricity price compensation were submitted to the German Emission Trading Authority (DEHSt) at the German Environment Agency, of which 18 applications were rejected. The reason for this was often that the manufactured products were not eligible for aid. Thus 340 applications including 970 installations were approved in total. The aid granted was 312 million euros for 2013 (see Table 2). Originally, an aid amount of 314 million euros was allocated to these companies at the end of 2014. From this amount about 2 million euros were clawed back from 19 undertakings after subsequent revisions of the aid decisions in the 2014 accounting year.

For 2014, 349 applications were submitted. Among the applicants there were 13 undertakings that submitted an application for electricity price compensation for the first time. 15 applications were rejected. A total aid amount of around 186 million euros was issued to 334 undertakings with 928 installations by the end of 2015. Approximately 600,000 euros of this amount was due to a difference carried forward (cf. explanations in Section 2, starting on page 5) from 2013. 56 undertakings profited from this scheme due to the production and electricity consumption trends in 91 of their installations.

The decline in the aid amount is due to a lower EUA price for the aid calculation for 2014. This was 4.68 euros in 2014 compared to 7.94 euros in 2013. The shares of individual industries in the aid amount have only slightly changed compared to 2013.



**Table 2: Number of approved applications and number of installations according to industries and sum of aid paid in 2013 and 2014**

Industry (EPC)	Number of applications	Number of installations	EPC 2013 [euro]
Clothing	8	8	294,916.01
Chemical industry	118	534	120,273,088.34
Iron and steel	54	168	77,002,181.86
Non-ferrous metals	49	113	51,439,608.27
Paper	111	147	63,112,609.63
<b>Total</b>	<b>340</b>	<b>970</b>	<b>312,122,404.11</b>

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Industry (EPC)	Number of applications	Number of installations	EPC 2014 [euro]
Clothing	8	8	112,527.51
Chemical industry	116	500	73,944,058.00
Iron and steel	52	163	45,409,771.84
Non-ferrous metals	49	112	31,682,918.05
Paper	109	145	35,123,819.72
<b>Total</b>	<b>334</b>	<b>928</b>	<b>186,273,095.12</b>

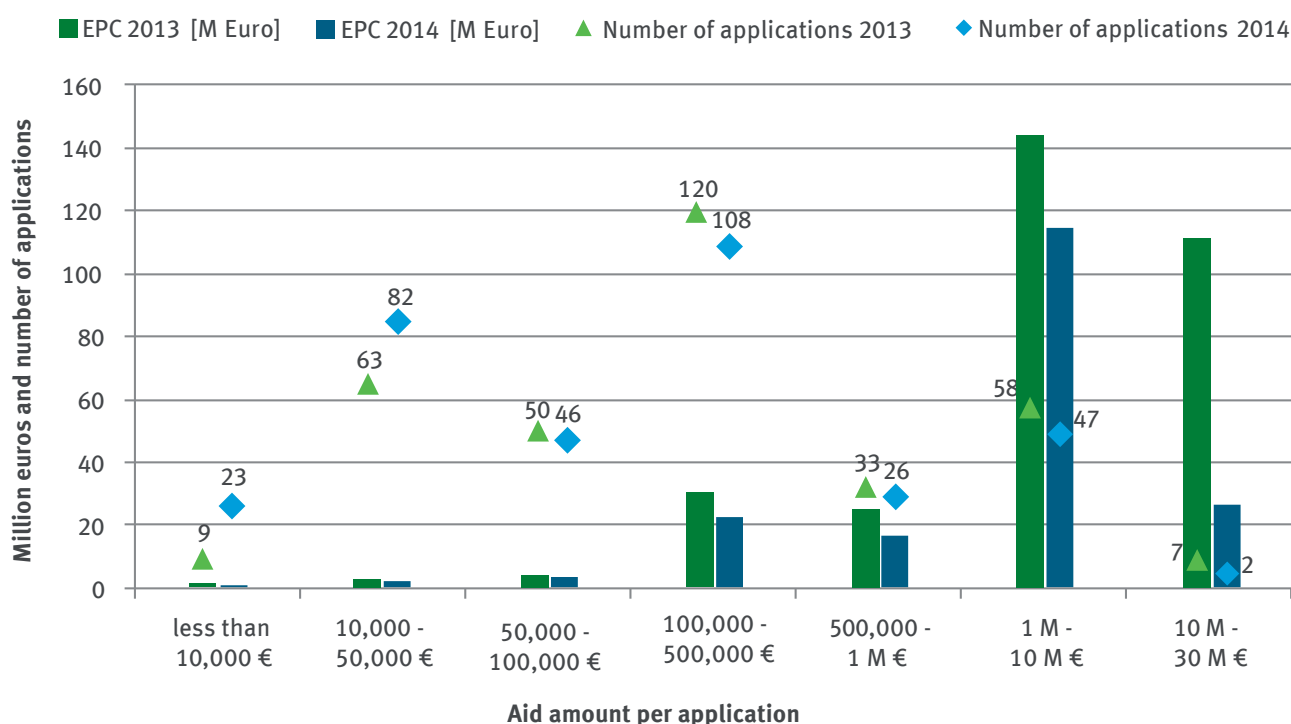
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Table 2 shows the distribution of the total aid amount to individual industries. The absolute aid for the chemical industry with around 74 million euros (2013: 120 million euros) decreased significantly due to a lower EUA price, but the share of aid increased from approximately 39 to 40 percent. The chemical industry therefore still has the largest proportion of the aid amount. This is followed by the iron and steel industry with about 45 million euros (2013: 77 million euros). Their share of the aid amount fell from about 25 to 24 percent. The paper industry accounted for about 35 million euros in 2014 (2013: 63 million euros). It still has about the third largest share of the total aid with 19 percent (2013: 20 percent). The non-ferrous metal industry received about 32 million euros in 2014, still about 17 percent of the total aid in 2014 (2013: 51 million euros). The clothing industry received about 113,000 euros (2013: 300,000 euros) or 0.1 percent, which is a very small proportion of the 2014 electricity price compensation.

The average aid for an undertaking was about 558,000 euros in 2014 (2013: 918,000 euros). However, the scattering of the aid per undertaking is very broad. For 2013, each of 65 undertakings – about 19 percent – received more than 1 million euros, which amounts to 80 percent of the aid amount. Because of the lower EUA price to be applied, the number of undertakings receiving aid of over 1 million euros decreased to 49 in 2014. In both years, about 20 percent of the undertakings received about 80 percent of the total aid amount.

Figure 2 shows the distribution of the number of undertakings and the aid amount according to differentiated types of aid. In 2014, a lower EUA price was relevant for the calculation of the aid amount. Therefore, the number of undertakings in the highest aid category of above 10 million euros dropped from 7 to 2 undertakings. There was therefore some movement in the other categories.





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Figure 2: Number of applications and total aid by aid amount per application

## 5 Results at installation level

### 5.1 Electricity price compensation and emissions trading

The 334 undertakings that received aid in 2014, produced eligible products in 928 installations. Of these installations 471, or about half, participate in the emissions trading scheme (see Table 3). The installations subject to emissions trading accounted for about 68 percent of the aid amount in 2014. Compared to 2013 there were no major changes here (see Table 6, page 15).

In the chemical industry, 304 out of 500 installations (61 percent) are not subject to emissions trading. These installations receive approximately 70 percent of the aid amount in this industry. The reason for this is that many electricity-intensive processes here do not discharge relevant amounts of greenhouse gases and are therefore not subject to emissions trading. In addition, many chemical sites are supplied from centralised power and steam sources, to which the emission trading obligation is limited.

The same applies to the non-ferrous metal industry – about 75 percent of the installations here (85 out of 112) are not included in the emissions trading scheme. These installations count for a share of only twelve percent of the aid amount available to this industry. This is mainly due to the fact that the major beneficiaries in the non-ferrous metal industry – the installations for aluminium production by electrolysis – are also subject to emissions trading.

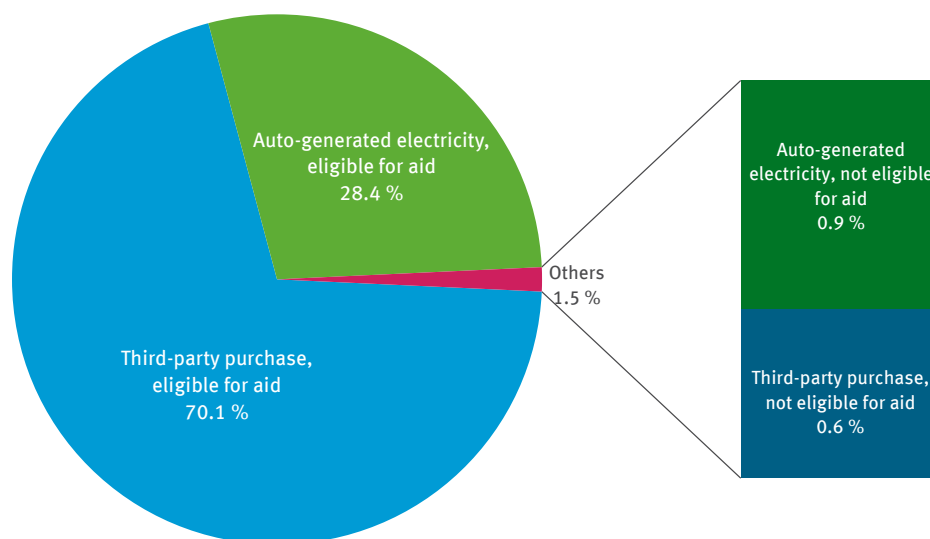
**Table 3:** Number of installations per industry in 2014, showing those subject to emissions trading and those not.

Industry (EPC 2014)	Number of installations	Of which		Share of aid in industry	
		ETS	Non-ETS	ETS	Non-ETS
Clothing	8	0	8	0 %	100 %
Chemical industry	500	196	304	31 %	69 %
Iron and steel	163	113	50	92 %	8 %
Non-ferrous metals	112	27	85	88 %	12 %
Paper	145	135	10	98 %	2 %
<b>Total result</b>	<b>928</b>	<b>471</b>	<b>457</b>	<b>68 %</b>	<b>32 %</b>

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## 5.2 Source of electricity

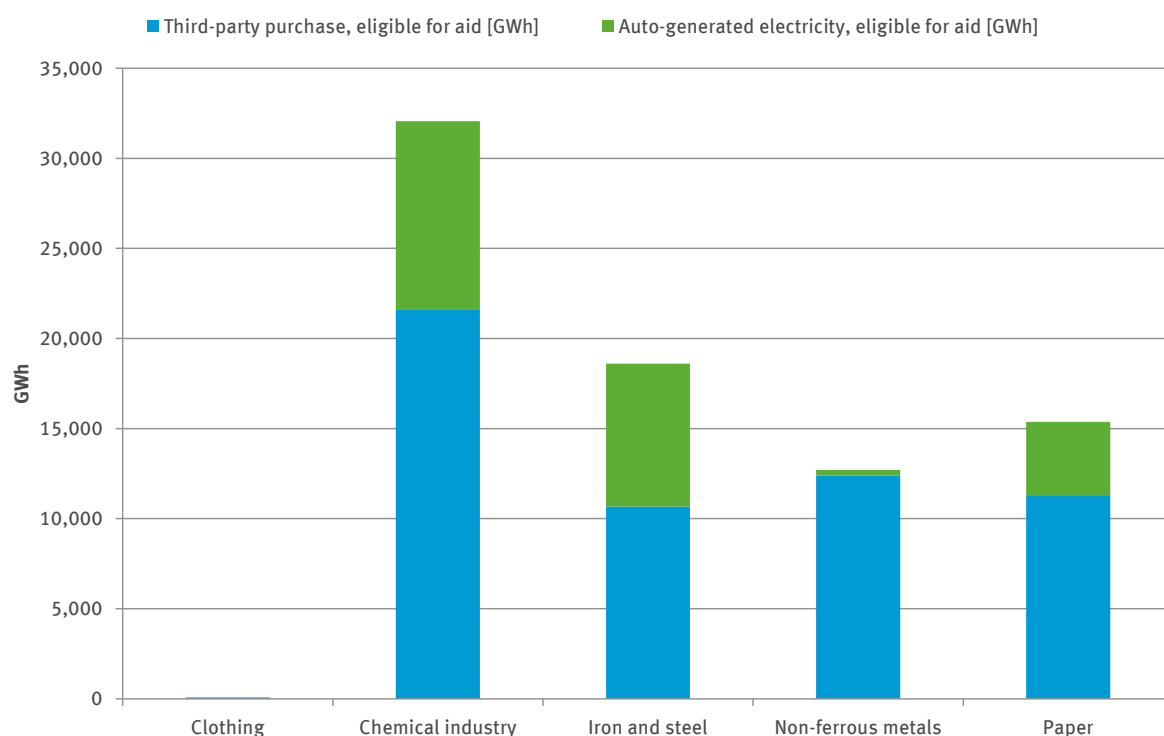
The basis for calculating aid is a CO<sub>2</sub> emission factor of 0.76 tonnes of CO<sub>2</sub> per megawatt-hour of electricity, which is uniform for all German undertakings. When no CO<sub>2</sub> costs occur in connection with the electricity consumed, no aid will be granted. This is, for example, the case when undertakings generate their own electricity from installations not subject to emissions trading. Figure 3 shows the share of individual electricity sources in the total electricity consumption of the installations for which electricity price compensation has been granted. Overall, 1.5 percent of total electricity consumption is not eligible for aid because no connected CO<sub>2</sub> costs occur. The share was still 1.3 percent of total electricity consumption in 2013 (see Figure 7, page 15). About 28 percent of electricity consumed is auto-generated in installations subject to emissions trading by undertakings that have received aid.



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**Figure 3:** Source of electricity in 2014

Depending on the industry, the share of auto-generated electricity in terms of total electricity consumption, however, is quite different. The clothing industry purchases electricity only from other undertakings. Hardly any electricity is produced in the field of non-ferrous metals: less than three percent of eligible electricity consumption is auto-generated. The share of in-house production in the paper industry is about a quarter of the eligible electricity consumption. In the iron and steel industry, in-house generation makes up 40 percent of eligible electricity consumption. In the chemical industry the in-house share of generation is about one third.



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Figure 4: Source of electricity of eligible electricity consumption by industry in 2014

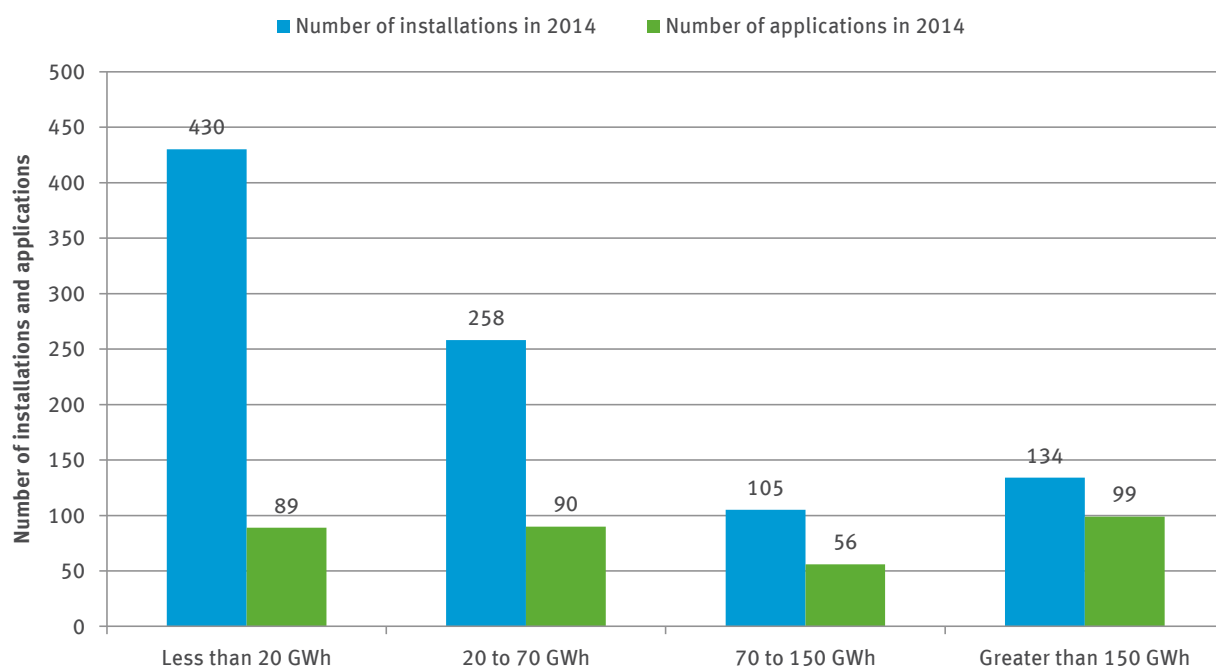
### 5.3 Installations by electricity consumption

Figure 5 shows the number of installations and applications grouped according to the total electricity consumption of the respective undertakings or installations<sup>11</sup>. The total electricity consumption does not reflect the eligible electricity consumption and may also contain electricity consumption for the production of non-eligible products. This serves only to illustrate the actual size of the undertaking or the installation.

Most installations fall in the range of electricity consumption of less than 20 gigawatt-hours per year, or 20 to 70 gigawatt-hours per year. However, considering the number of applications (i.e., those from undertakings in each category), the highest number belongs to the category of large consumers with an electricity consumption above 150 gigawatt-hours per year. The number of applications in other categories is similarly high and is only somewhat less in the category of electricity consumption between 70 and 150 gigawatt-hours. Thus, the undertakings awarded with aid in 2014 are distributed approximately evenly over all electricity consumption categories.

Compared to the 2013 figures it is striking that the number of installations has decreased considerably in the two lower electricity consumption categories. In 2013, 458 installations fell in the less than 20 gigawatt-hours category, in 2014 however this was down to 430 installations, i.e. 28 less. For the category 20 to 70 gigawatt-hours, the number of installations dropped by 18 from 276 to 258 (see Figure 9, page 16). The reasons for this decline may be down to the effort of making an application compared to the resulting amount of aid and the retention corresponding to CO<sub>2</sub> costs of one gigawatt-hour electricity.

<sup>11</sup> The categories are based on the Eurostat methodology "Energy statistics - electricity prices for domestic and industrial consumers, price components", Section 3.4. Statistical concepts and definitions, New Methodology (from 2007 semester 2 onwards), Industry, Volume-IA, -IB, -IC, -ID summarised < 20 GWh, Volume-IE 20 to 70 GWh, Volume-IF 70 to 150 GWh, Volume-IG above 150 GWh, cf. [http://ec.europa.eu/eurostat/cache/metadata/DE/nrg\\_pc\\_204\\_esms.htm](http://ec.europa.eu/eurostat/cache/metadata/DE/nrg_pc_204_esms.htm) (accessed on 05/02/2016).



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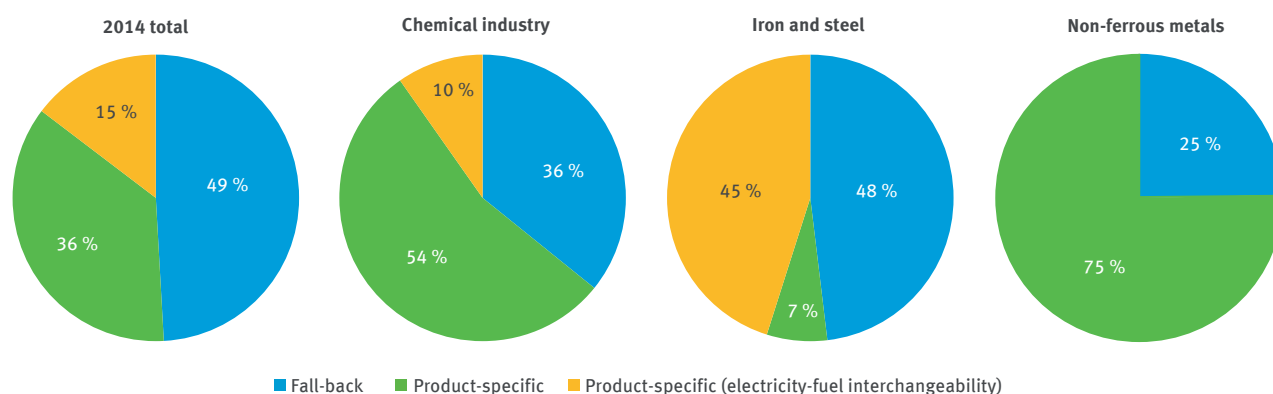
Figure 5: Number of installations and applications according to electricity consumption in 2014

## 6 Results at calculation-element level

As described in Section 2, products manufactured within the same installation are combined to form calculation elements for the purpose of calculating the aid. The prerequisite for combining various products into one calculation element is an identical benchmark, or they must belong to the same sector if they are fall-back products. There are 19 product-specific benchmarks and 16 fall-back combinations. Overall, the aid decisions, both in 2013 and 2014, were based on about 1,000 calculation elements. However, no application has been submitted in the „1810 – Manufacture of leather clothes“ sector. Neither have the product benchmarks silicon carbide, high carbon ferromanganese and silico-manganese been used.

Figure 6 shows the shares for both the fall-back approach and benchmark approach in the total amount of aid granted for 2014. 51 percent of the total aid was given for the production of products where a product-specific benchmark applies. 49 percent of the total aid was due to the production of products where the fall-back factor was used for electricity consumption to determine the aid amount. In 2013, fall-back products with 51 percent still had a greater share of the aid amount (cf. Figure 10, page 17).

Depending on the industry these shares are very different. There are no benchmarks in the clothing and paper industries and the aid amount is calculated using the fall-back factor. In the non-ferrous metal industry, about 75 percent of the aid amount is determined through benchmarks. This figure is over 60 percent in the chemical industry and greater than 50 percent for iron and steel.



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**Figure 6: Shares of fall-back approach and benchmark approach in the 2014 total aid amount and in aid amounts of selected industries**

In the chemical industry and the iron and steel industry, the EU State Aid Guidelines envisage compensation based on benchmarks while taking into account the interchangeability of electricity and fuels. Typically, these benchmarks are used in installations which are also subject to emissions trading. If a benchmark product is produced in a fairly electricity-intensive way, the installation receives a higher electricity price compensation. However, if a product is manufactured in a fuel- or heat-intensive way, for example using a large amount of steam, it receives more free allowances. However, benchmarks with interchangeability of electricity and fuels can also be used in cases when emissions trading obligation does not apply.

Most of the electricity-intensive products in the chemical industry from installations that also participate in emissions trading, are produced by using more heat than electricity, thus the resulting electricity price compensation is relatively low and the free allowances predominate. In addition, more than 60 percent of the installations in the chemical industry that receive electricity price compensation, are not subject to emissions trading (see Section 5.1, starting on page 9). Therefore, the ratio of benchmarks with interchangeability of electricity and fuels to the overall aid amount in the industry is relatively low.

In the iron and steel industry, electric steel plants especially benefit from the electricity price compensation. Benchmarks taking into account the interchangeability of electricity and fuel also exist for the production of electrical steel, however electricity use clearly dominates among them, even compared to other installations in the iron and steel industry which receive aid. This is reflected in the high share of benchmarks with interchangeability of electricity and fuel in the industry's overall aid amount.

Table 4 shows the shares of the product benchmarks in the aid amount for the 2014 accounting year. The production of chlorine (Cl<sub>2</sub>) has the largest share with 16 percent, followed by the production of primary aluminium with about 12 percent. Five other benchmarks account for 1.5 to 5.8 percent of the aid amount. They include the benchmarks of iron and steel industry (carbon steel, high-alloy steel, oxygen steel). The other nine product benchmarks account for a total of 3.7 percent of the aid amount for 2014. Compared with 2013, the shares of these major benchmarks have changed slightly but their order is almost unchanged. Only the benchmarks „high-value chemicals“ and „oxygen steel“ have reversed their position because the share of „high-value chemicals“ in total aid has increased from 1.6 percent in 2013 to 2.2 percent in 2014 and the share of oxygen steel dropped from 1.7 to 1.5 percent (see Table 7, page 17).

**Table 4: Shares of benchmark calculation elements in the 2014 aid amount**

Name of calculation element	Share of 2014 total EPC
Chlorine (Cl <sub>2</sub> )	16.4 %
Primary aluminium	11.6 %
EAF (Electrical Arc Furnace) carbon steel	5.8 %
EAF highalloy steel	5.0 %
Hyperpure polysilicon	4.8 %
Highvalue chemicals	2.2 %
Oxygen steel	1.5 %
Other nine benchmarks	3.7 %
<b>Total result</b>	<b>51 %</b>

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Table 5 shows the shares of fall-back calculation elements in the aid amount (for 2013, see Table 8, page 17). The sectors „2112 – Manufacture of paper and paperboard“ with 14.5 percent and „2710 – Manufacture of basic iron and steel and of ferro-alloys „ with 10 percent have the largest shares. Seven other sectors and subsectors have shares from 1.8 to 5.8 percent of the aid amount. The remaining six sectors and subsectors account for three percent of the aid amount.

**Table 5: Shares of fall-back calculation elements in the 2014 aid amount**

Name of calculation element	Share of 2014 total EPC
Fall-back 2112 - Manufacture of paper and paperboard	14.5 %
Fall-back 2710 - Manufacture of basic iron and steel and of ferro-alloys	10.0 %
Fall-back 2414 - Manufacture of other organic basic chemicals	5.8 %
Fall-back 2111 (subsector) - Mechanical pulp	4.5 %
Fall-back 2416 (subsector) - Manufacture of plastics in primary forms	2.9 %
Fall-back 2413 - Manufacture of other inorganic chemicals	2.6 %
Fall-back 2744 - Copper production	2.2 %
Fall-back 2742 - Aluminium production	1.8 %
Fall-back 2415 - Manufacture of fertilisers and nitrogen compounds	1.8 %
Other six sectors and subsectors (fall-back)	3.0 %
<b>Total result</b>	<b>49 %</b>

As of 22/01/2016

## 7 Outlook

For the 2013 accounting year, a budget of up to 350 million euros was available for electricity price compensation under the Energy and Climate Fund. About 90 percent of this budget was spent. For the 2014 accounting year, the budget was 203 million euros due to lower EUA prices. Nearly 92 percent was spent.

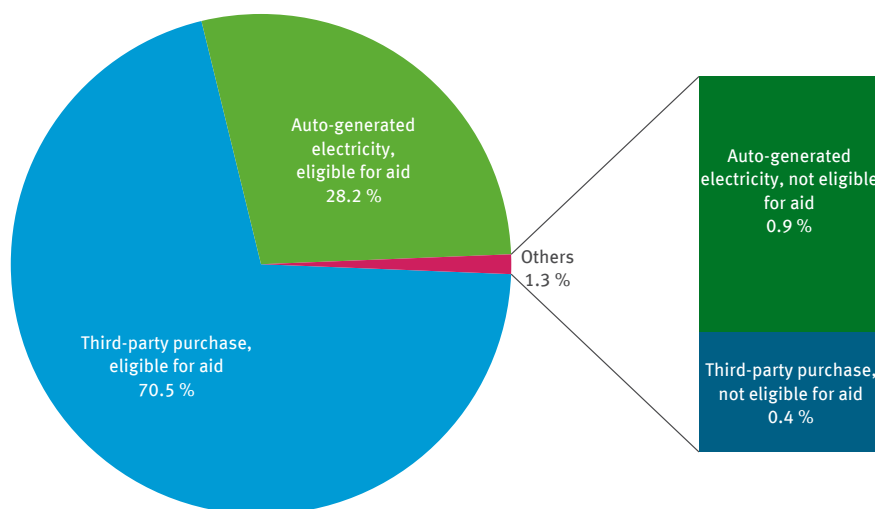
For the 2015 accounting year, the application procedure started on 01/03/2016. Operators can submit applications by 31/05/2016. The EUA price set to calculate the aid for the 2015 accounting year is 6.17 euros. It is thus again above the 2014 price. This will lead to a renewed increase in the overall aid amount. The Federal Ministry for Economic Affairs and Energy has provided 245 million euros for the 2015 accounting year in February 2016.

## 8 Annex

Table 6: Number of installations per industry in 2013, showing those subject to emissions trading and those not

Industry (EPC 2014)	Number of installations	Of which		Share of aid in industry	
		ETS	Non-ETS	ETS	Non-ETS
Clothing	8	0	8	0 %	100 %
Chemical industry	534	200	334	30 %	70 %
Iron and steel	168	115	53	92 %	8 %
Non-ferrous metals	113	26	87	88 %	12 %
Paper	147	136	11	98 %	2 %
<b>Total result</b>	<b>970</b>	<b>477</b>	<b>493</b>	<b>69 %</b>	<b>31 %</b>

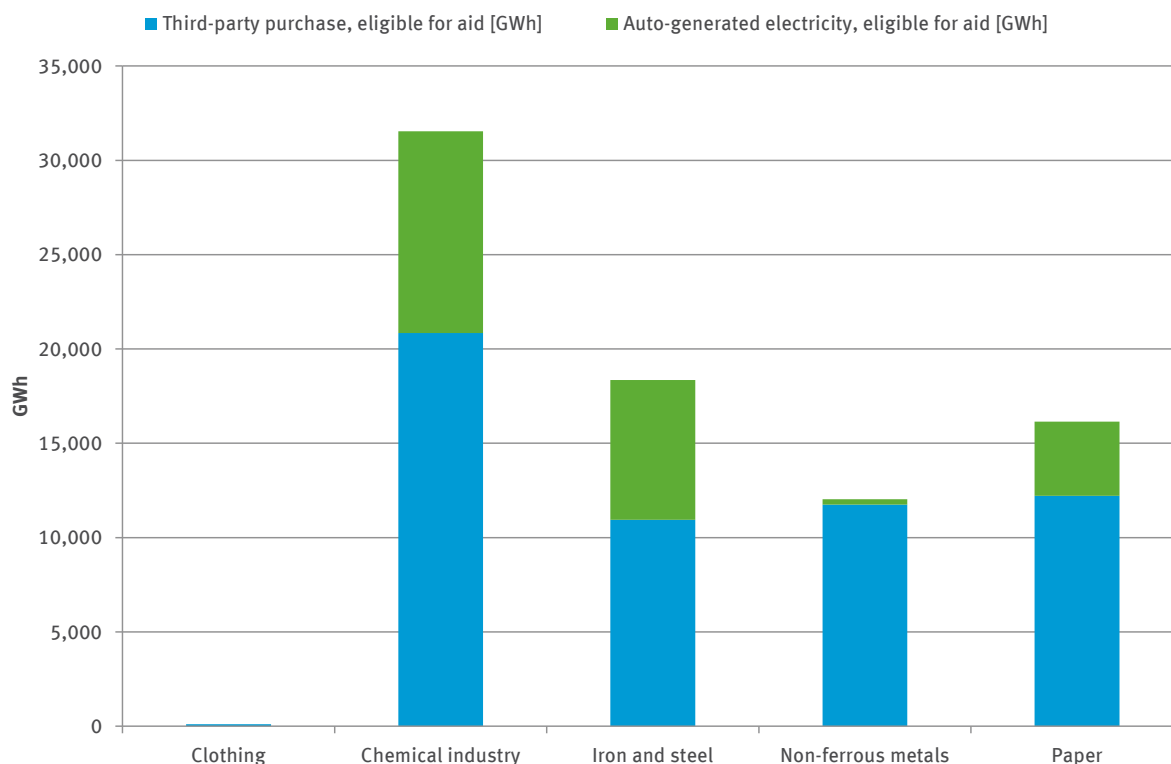
As of 22/01/2016



As of 22/01/2016

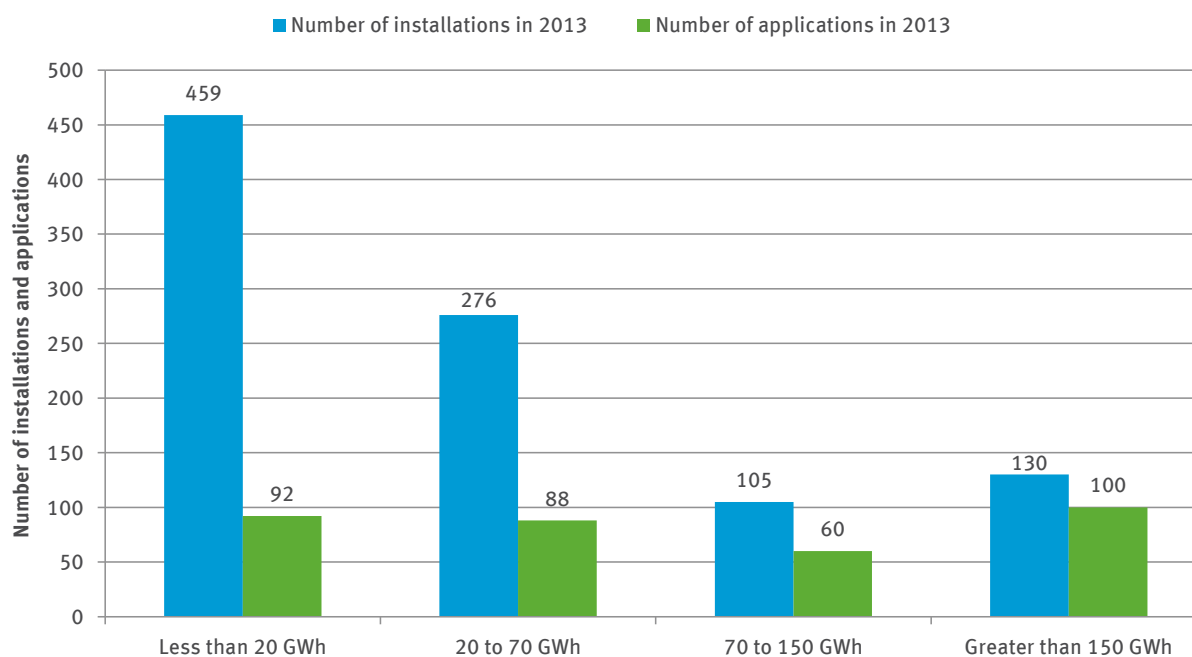
Figure 7: Source of electricity in 2013





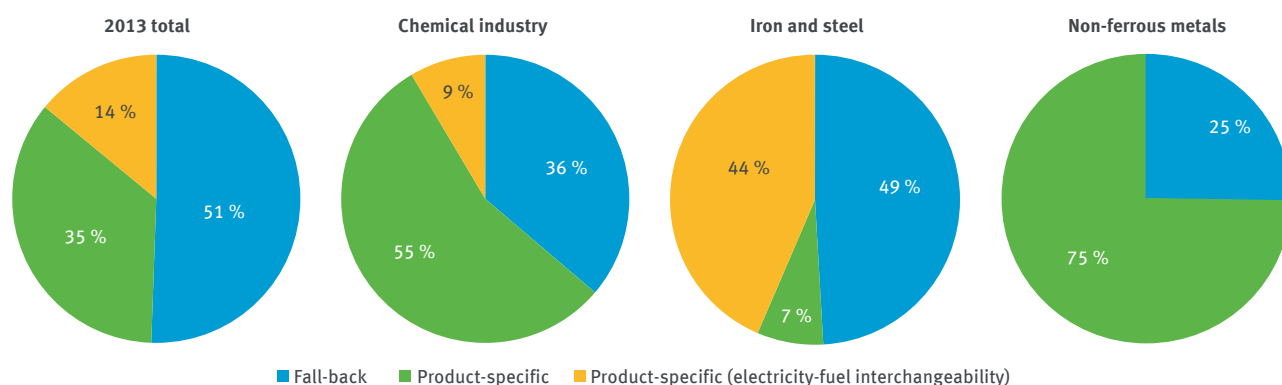
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Figure 8: Source of electricity by industry



As of 22/01/2016

Figure 9: Number of installations and applications according to electricity consumption in 2013



As of 22/01/2016

**Figure 10:** Shares of fall-back approach and benchmark approach in the 2013 total aid amount and in aid amounts of selected industries

**Table 7:** Shares of benchmark calculation elements in the 2013 aid amount

Name of calculation element	Share of 2013 total EPC
Chlorine (Cl <sub>2</sub> )	16.2 %
Primary aluminium	11.1 %
EAF carbon steel	5.7 %
EAF high-alloy steel	5.0 %
Hyperpure polysilicon	4.5 %
Oxygen steel	1.7 %
High value chemicals	1.6 %
Other nine benchmarks	3.6 %
<b>Total result</b>	<b>49 %</b>

As of 22/01/2016

**Table 8:** Shares of fall-back calculation elements in the 2013 aid amount

Name of calculation element	Share of 2013 total EPC
Fall-back 2112 - Manufacture of paper and paperboard	15.7 %
Fall-back 2710 - Manufacture of basic iron and steel and of ferro-alloys	10.6 %
Fall-back 2414 - Manufacture of other organic basic chemicals	5.6 %
Fall-back 2111 (subsector) - Mechanical pulp	4.5 %
Fall-back 2416 (subsector) - Manufacture of plastics in primary forms	2.9 %
Fall-back 2413 - Manufacture of other inorganic chemicals	2.5 %
Fall-back 2744 - Copper production	2.1 %
Fall-back 2742 - Aluminium production	1.9 %
Fall-back 2415 - Manufacture of fertilisers and nitrogen compounds	1.7 %
Other six sectors and subsectors (fall-back)	3.1 %
<b>Total result</b>	<b>51 %</b>

As of 22/01/2016

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