

# WEEE and BAT Statistics 2009

## Denmark

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## Preface

Every year DPA-System prepares "WEEE and BAT Statistics - Denmark", presenting those data that producers/importers and local authorities report in connection with the producer responsibility scheme for waste electrical and electronic equipment and batteries and accumulators.

The producer responsibility for electrical equipment has its legal basis in the Danish Statutory Order on placing on the market of electrical and electronic equipment and handling of waste electrical and electronic equipment "(The WEEE Order) No. 362 of 6 April 2010. The Order has its basis the European Parliament and Council Directive 2002/96/EC of 27 January 2003 on waste electrical and electronic equipment (WEEE Directive: Waste Electrical and Electronic Equipment).

The producer responsibility for waste batteries is provided in the "Statutory Order on batteries and accumulators and waste batteries and accumulators (Batteries Order) No. 1186 of 10 December 2009. The Order has its basis the European Parliament and Council Directive 2006/66/EC of 6 September 2006 on batteries and accumulators and waste batteries and accumulators.

Denmark and other EU Member States report marketed, collected and treated volumes to the EU Commission who monitors compliance with the objectives for collection, recovery and recycling.

These are the fourth WEEE Statistics. The statistics contain data for the calendar year 2009. Data are obtained through the registered producers' annual reports to the producer register, and the local authorities' records of collection sites and collection equipment (2010 data).

This year for the first time, the statistics contain data on the volume of actual marketed and collected volumes of batteries under the battery producer responsibility including batteries collected per municipality in 2009. Data also show how many producers have entered the register since the producer responsibility became effective on 1 January 2009.

Thus, the statistics give statements of number of municipal collection sites per municipality, number of collection equipment units, number of registered producers and affiliation to collective schemes. In addition, you will find quantitative statements of electronic equipment put on the market, collected WEEE as well as the treatment it has been subjected to broken down on treatment option and compared with statutory EU targets for recycling and recovery. Furthermore, the geographical location of the first treatment of WEEE is shown.

When possible, 2009 figures are compared with 2006, 2007 and 2008 figures. It should be noted that in some cases 2007 and 2008 data have been adjusted from what was presented in previous WEEE Statistics. This adjustment has been made, since after the publication of previous WEEE Statistics new figures have been reported by the producers; Further to a Danish Environmental Protection Agency decision<sup>1</sup> producers may report retrospectively. Changes are made by both individual producers and collective schemes.

Appendix 1 gives a general description of issues influencing data reported in the WEEE and BAT field.

Remark that table numbering is consecutive, while notes are numbered for each table or figure.

In these statistics producers and importers are referred to as 'producers' only, since the same rules apply to both groups.

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DPA-System, 2010,  
[www.dpa-system.dk](http://www.dpa-system.dk)

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<sup>1</sup> The Danish Environmental Protection Agency has decided that when a producer registers after entry into force of the producer responsibility scheme and this producer has placed equipment on the market in previous years in which the producer responsibility scheme was in force, these volumes must be reported.



## Municipal data

Table 1. Municipal collection sites and collected batteries per municipality

Municipality (1)	2010			2009
	Inhabitants	Inhabitants/ Collection site	Collection Sites (2)	Collected batteries (tonnes) (3)
Albertslund	27.783	27.783	1	1,4
Allerød	24.131	24.131	1	3,8
Assens	41.969	5.996	7	7,7
Ballerup	47.641	47.641	1	9,0
Billund	26.195	8.732	3	7,3
Bornholm	42.076	7.013	6	10,8
Brøndby	33.774	16.887	2	6,8
Brønderslev-Dronninglund	35.784	7.157	5	0,0
Dragør	13.591	13.591	1	2,5
Christiansø	100	0	0	0,0
Egedal	41.584	13.861	3	10,8
Esbjerg	115.049	19.175	6	38,0
Fanø	3.219	3.219	1	0,0
Favrskov	46.590	9.318	5	9,2
Faxe	35.355	11.785	3	5,5
Fredensborg	39.147	13.049	3	7,8
Fredericia	49.978	9.996	5	15,3
Frederiksberg	97.368	0	0	0,0
Frederikshavn	61.897	7.737	8	12,0
Frederikssund	44.197	11.049	4	8,6
Furesø	38.221	19.111	2	9,5
Faaborg-Midtfyn	51.984	7.426	7	9,7
Gentofte	71.212	0	0	0,0
Gladsaxe	64.424	64.424	1	6,7
Glostrup	21.362	10.681	2	4,5
Greve	47.879	47.879	1	9,8
Gribskov	40.753	20.377	2	9,6
Guldborgsund	62.821	7.853	8	13,0
Haderslev	56.387	14.097	4	15,4
Halsnæs	31.042	15.521	2	6,3
Hedensted	45.934	11.484	4	9,4
Helsingør Kommune	61.287	61.287	1	11,5
Herlev	26.639	26.639	1	14,4
Herning	85.647	12.235	7	19,0
Hillerød	47.602	47.602	1	10,0
Hjørring	66.711	6.671	10	22,8
Holbæk	69.536	13.907	5	18,3
Holstebro	57.159	14.290	4	17,0
Horsens	82.134	20.534	4	14,9
Hvidovre	49.831	12.458	4	5,1
Høje Taastrup	47.563	11.891	4	19,0
Hørsholm	24.391	24.391	1	4,9
Ikast-Brande	40.350	10.088	4	9,6
Ishøj	20.643	20.643	1	1,1

Municipality (1)	2010			2009
	Inhabitants	Inhabitants/ Collection site	Collection Sites (2)	Collected batteries (tonnes) (3)
Jammerbugt	38.839	9.710	4	1,8
Kalundborg	49.271	7.039	7	11,2
Kerteminde	23.752	7.917	3	5,0
Kolding	89.160	17.832	5	15,0
København	530.902	88.484	6	105,7
Køge	57.211	3.814	15	11,8
Langeland	13.493	4.498	3	2,9
Lejre	26.774	26.774	1	3,9
Lemvig	21.718	10.859	2	4,3
Lolland	46.806	4.255	11	7,2
Lyngby-Taarbæk	52.364	26.182	2	21,4
Læsø	1.964	1.964	1	0,0
Mariagerfjord	42.553	7.092	6	16,0
Middelfart	37.642	9.411	4	6,2
Morsø	21.765	10.883	2	0,0
Norddjurs	38.119	7.624	5	14,3
Nordfyns	29.573	9.858	3	6,0
Nyborg	31.650	10.550	3	5,7
Næstved	80.996	16.199	5	18,8
Odder	21.759	10.880	2	3,5
Odense	188.907	188.907	1	30,7
Odsherred	32.955	8.239	4	9,6
Randers	94.828	18.966	5	15,7
Rebild	28.896	9.632	3	1,0
Ringkøbing-Skjern	58.378	6.486	9	35,7
Ringsted	32.636	32.636	1	6,3
Roskilde	81.964	11.709	7	14,4
Rudersdal kommune	54.488	27.244	2	10,4
Rødovre	36.240	18.120	2	7,7
Samsø	3.986	3.986	1	0,0
Silkeborg	88.513	22.128	4	20,8
Skanderborg kommune	57.385	11.477	5	13,4
Skive	48.121	24.061	2	9,4
Slagelse	77.423	12.904	6	17,7
Solrød	20.845	20.845	1	1,5
Sorø	29.503	9.834	3	8,4
Stevns	21.945	10.973	2	3,6
Struer	22.423	11.212	2	3,4
Svendborg	58.921	19.640	3	13,6
Syddjurs	41.469	4.608	9	7,1
Sønderborg	76.402	9.550	8	26,6
Thisted	45.296	9.059	5	12,3
Tønder	39.693	4.410	9	8,1
Tårnby	40.467	20.234	2	7,4
Vallensbæk	14.162	0	0	0,0
Varde	50.422	7.203	7	15,8
Vejen	42.820	8.564	5	7,4
Vejle	106.603	26.651	4	21,8



Municipality (1)	2010			2009
	Inhabitants	Inhabitants/ Collection site	Collection Sites (2)	Collected batteries (tonnes) (3)
Vesthimmerlands	38.082	9.521	4	3,7
Viborg	93.474	11.684	8	32,6
Vordingborg	46.263	11.566	4	8,7
Ærø	6.689	6.689	1	1,6
Aabenraa	59.970	9.995	6	15,8
Aalborg	197.702	98.851	2	57,7
Århus	307.119	34.124	9	64,8
			<b>381</b>	<b>1.208,8</b>

**Notes:** (1) Data on inhabitants derive from extracts from Statistics Denmark 1.1.2010. (2) Municipal registration of collection sites with DPA-System, from where producers are to collect WEEE and batteries from households (3) Amount of batteries collected per municipality, according to producer's report 2009.

**Table 2. Municipal collection sites total**

Municipal collection sites		
	Number	Index
Collection sites 2007	392	100
Collection sites 2008	409	104
Collection sites 2009	433	110
Collection sites 2010	381	98

Source: DPA-System Database of municipalities 09-09-2010

**Note:** The year refers to when data were computed. After some years where the number of municipal collection sites has been increasing a reduction has appeared in 2010. Thus, the number of collection sites as per 1 September 2010 was 381. This may be a consequence of the local government reform, but may also be due to the fact that the municipalities were obliged to update their information due the revised statutory order.

**Table 3. Municipalities without collection site**

Municipalities without collection site
Christiansø
Frederiksberg
Gentofte
Vallensbæk

Note: As a novelty, Gentofte no longer has a collection site.

**Table 4. Collection equipment per type**

Type of equipment	Number of collection equipment units			
	2010	2009	2008	2007
Large containers	545	920	649	523
Wire Cages	6.540	8.568	6.471	5.443
Containers (light sources)	618	1.239	769	935
Barrels (light sources)	750	-	-	-
Barrels (batteries)	1.377	-	-	-
<b>Total:</b>	<b>9.830</b>	<b>10.727</b>	<b>7.889</b>	<b>6.901</b>

Source: DPA-System Database of municipalities 09-09-2010

**Note:** The 2010 figures shows status after the revised WEEE-order and the new fractions, and after the municipalities have updated their informations. The barrels for light sources and batteries are introduced in connection with the implementation of Battery-order and the revision of the WEEE-order.

**Table 5. Collection from municipal collection sites (1)**

	2009	2008	2007	2006 (9 months)
<b>Tonnes per fraction (2)</b>				
1. Large household appliances	34.009	33.034	34.605	27.868
2. Small household appliances	8.926	7.596	7.285	1.925
3. IT and telecommunications equipment	12.907	14.883	13.418	8.328
4. Consumer equipment	22.097	15.845	11.449	11.449
5. Lighting equipment (light sources)	416	421	423	238

Source: DPA-System allocation basis 20-04-2009

**Notes:** (1) Producers collect household WEEE through municipal collection sites in five fractions. In addition household WEEE is collected through collective scheme sites and through producers' own collection. These other collected volumes are presented in Table 12 and stated according to the ten categories of the WEEE Directive. (2) Fractions as stated in the WEEE Order No. 664 of 27 June 2005. From 2010 new fractions have been implemented: Large household appliances, Cooling equipment, Small household appliances, Screens and monitors, Lighting equipment.

## Producer data in WEEE register

**Table 6. Producers in the WEEE register**

WEEE Register outline	2009	%	2008	2007
Total number of registrations	<b>1.660</b>		1.341	1.077
Registrations with business categories (1)	1.192	72%	974	772
Registrations with household categories (2)	626	38%	504	442
Individual compliers (3)	608	37%	330	154
Members of collective schemes	1.052	63%	1.011	923
<b>Collective schemes:</b>				
Elretur	961	58%	929	866
LWF	32	2%	30	26
ERP	19	1%	11	10
RENE AG	48	3%	41	21

Source: DPA-System 09-09-2010

**Notes:** (1) Share of total number of producers having at least one active business end user. (2) Share of total number of producers having at least one active household end user. These figures cannot be summed up to total number of registered producers, since producers may be registered with several categories and end users. See definition of end users below table 9 (3) Producers not affiliated to a collective scheme are predominantly producers with business end users.

**Table 7. Producers cancelled from the WEEE register**

2010	2009
Cancelled registrations as per. 09-09-2010 (5)	148

Source: DPA-System Database of producers 06-04-2009

**Note:** (5) (awaiting data) Number of enterprises cancelled due to lack of correct and adequate annual reporting as per 9 September 2010 or company withdrawal from the market.

**Table 8. New producers entered in the WEEE register (awaiting data)**

	2009
New registrations as per 01-04 2009 – 01-04 2010	129
New registrations 2009 until 20-04-2009	286

Source: DPA-System allocation basis 20-04-2009

**Table 9. Producers per category and end user**

Number of WEEE registrations per category and end user		
	Businesses	Households
1) Large household appliances	80	83
2) Small household appliances	83	207
3) IT and telecommunications equipment	298	162
4) Consumer equipment	89	172
5a) Luminaries	139	0
5b) Light sources	167	65
6) Electrical and electronic tools	199	78
7) Toys, leisure and sports equipment	36	114
8) Medical devices	165	23
9) Monitoring and control instruments	272	51
10) Automatic dispensers	30	0

Source: DPA-System 09-09-10

**Note:** Shows number of registrations as per 9.9.2010. A producer may be active in several categories within households and businesses. The table shows number of registered enterprises per category. The sum of these figures does not express total number of registered enterprises. When producers register the product categories of their activities they must state whether the products are sold to end users in private households or in businesses. End users are described as follows:

- Households: Products whose final use is with private consumers.
- Businesses: Products whose final use is with businesses.

**Table 10. Producers' share of total marketed volumes per category.**

Producers	Market share in percent of total market per category													
	1	2	3	4	5a	5b	6	7	8	9	10	Bat <sup>(1)</sup>	Bat <sup>(2)</sup>	Bat <sup>(3)</sup>
<b>100 smallest</b>	4%	0%	0%	0%	-----	1%	0%	22%	4%	0%	-----	0%	-----	32%
<b>10 largest</b>	79%	62%	54%	76%	78%	85%	64%	80%	57%	64%	94%	65%	93%	89%

**Note:** (1) Portable batteries. (2) Industrial batteries. (3) Automotive batteries. It appears that in all categories the market is dominated by a few large enterprises and many small companies.  
----- = All producers are among the 10 largest companies, thus there are no producers in these categories among the small companies.

# Volumes in WEEE-register

Table 11. Electronic equipment put on the market (1)

2009- stated in tonnes	Households	Businesses	Total
1) Large household appliances	65.937	5.825	71.762
2) Small household appliances	10.085	539	10.624
3) IT and telecommunications equipment	13.498	10.656	24.154
4) Consumer equipment	18.912	1.202	20.114
5a) Lighting equipment – luminaries (2)	-	2.748	2.748
5b) Lighting equipment – light sources	532	1.182	1.714
6) Electrical and electronic tools	5.154	3.141	8.296
7) Toys, leisure and sports equipment	3.773	177	3.950
8) Medical devices	213	1.335	1.548
9) Monitoring and control instruments	84	864	948
10) Automatic dispensers (3)	-	791	791
<b>Total</b>	<b>118.189</b>	<b>28.459</b>	<b>146.649</b>

Source: DPA-System 09-09-2010

2008- stated in tonnes (4)	Households	Businesses	Total
1) Large household appliances	68.715	5.828	74.543
2) Small household appliances	9.208	487	9.694
3) IT and telecommunications equipment	16.164	9.155	25.319
4) Consumer equipment	21.927	981	22.908
5a) Lighting equipment – luminaries	-	3.424	3.424
5b) Lighting equipment – light sources	429	926	1.355
6) Electrical and electronic tools	6.681	2.711	9.391
7) Toys, leisure and sports equipment	2.239	325	2.564
8) Medical devices	366	3.888	4.254
9) Monitoring and control instruments	72	784	856
10) Automatic dispensers	-	643	643
<b>Total</b>	<b>125.801</b>	<b>29.151</b>	<b>154.952</b>

Source: DPA-System 09-09-2010

2007- stated in tonnes	Households	Businesses	Total
1) Large household appliances	78.230	5.909	84.139
2) Small household appliances	9.598	589	10.187
3) IT and telecommunications equipment	11.770	14.831	26.601
4) Consumer equipment	20.704	863	21.567
5a) Lighting equipment – luminaries	-	3.445	3.445
5b) Lighting equipment – light sources	343	1.005	1.348
6) Electrical and electronic tools	8.597	2.875	11.471
7) Toys, leisure and sports equipment	1.469	317	1.786
8) Medical devices	129	4.068	4.197
9) Monitoring and control instruments	103	482	585
10) Automatic dispensers	-	495	495
<b>Total</b>	<b>130.944</b>	<b>34.878</b>	<b>165.821</b>

Source: DPA-System 09-09-2010

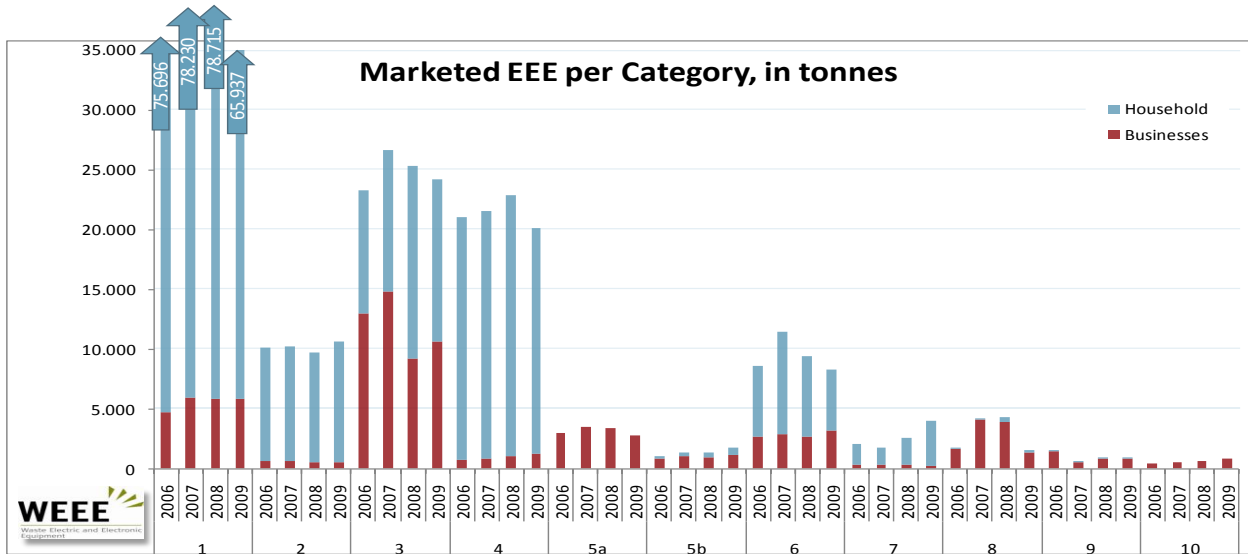
2006 - stated in tonnes	Households	Businesses	Total
1) Large household appliances	75.696	4.665	80.361
2) Small household appliances	9.483	626	10.109
3) IT and telecommunications equipment	10.359	12.950	23.308
4) Consumer equipment	20.260	739	20.998

5a) Lighting equipment – luminaries	-	2.955	2.955
5b) Lighting equipment – light sources	223	817	1.040
6) Electrical and electronic tools	5.843	2.696	8.539
7) Toys, leisure and sports equipment	1.768	323	2.091
8) Medical devices	91	1.691	1.782
9) Monitoring and control instruments	48	1.422	1.469
10) Automatic dispensers	-	400	400
<b>Total</b>	<b>123.771</b>	<b>29.282</b>	<b>153.053</b>

Source: DPA-System 09-09-2010

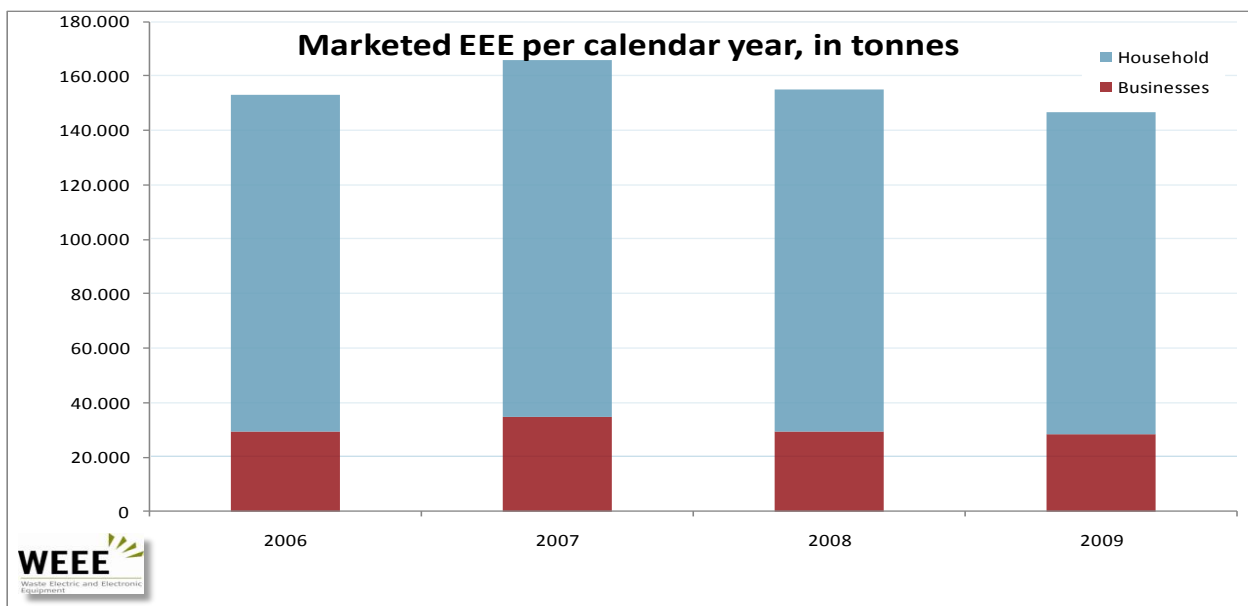
**Notes:** (1) All figures are based on annual reports to DPA-System from producers and collective schemes. (2) For category 5a luminaires are covered by the producer responsibility for business end users, but not for household end users. (3) Category 10, automatic dispensers, is not considered as WEEE from households. (4) 2008 figures have been adjusted from previous statistics.

**Figure 1. Electronic equipment put on the market per category**



**Note:** Names of category numbers 1-10 appear from Table 11.

**Figure 2. Electronic equipment put on the market, total**



**Table 12. WEEE collection**

2009 - stated in tonnes	WEEE collection from households (1)				WEEE collection from businesses			Total WEEE collection
	Municipal collection sites (2)	Collective scheme sites (3)	Producers' collection (4)	Total	Collective scheme sites	Producers' collection	Total	
1) Large household appliances	34.009	2.161	878	37.049	2	104	107	37.155
2) Small household appliances	5.654	103	51	5.808	14	0	14	5.822
3) IT and telecommunications equipment	12.907	92	459	13.459	166	1.005	1.171	14.630
4) Consumer equipment	22.097	332	127	22.557	4	12	16	22.573
5a) Lighting equipment – luminaries (5)	-	-	-	-	2	1	4	4
5b) Lighting equipment – light sources	416	6	0	422	223	4	227	649
6) Electrical and electronic tools	2.247	52	0	2.299	6	8	14	2.313
7) Toys, leisure and sports equipment	874	20	0	894	2	0	2	897
8) Medical devices	91	2	0	93	11	19	30	123
9) Monitoring and control instruments	60	1	0	61	0	41	41	102
10) Automatic dispensers (6)	-	-	-	-	0	0	1	1
<b>Total</b>	<b>78.356</b>	<b>2.770</b>	<b>1.516</b>	<b>82.642</b>	<b>431</b>	<b>1.195</b>	<b>1.626</b>	<b>84.268</b>

Kilde: DPA-System 09-09-2010

2008 - stated in tonnes	WEEE collection from households				WEEE collection from businesses			Total WEEE collection
	Municipal collection sites	Collective scheme sites	Producers' collection	Total	Collective scheme sites	Producers' collection	Total	
1) Large household appliances	33.034	2.140	599	35.773	1	110	111	35.885
2) Small household appliances	4.765	67	4	4.835	13	0	13	4.848
3) IT and telecommunications equipment	14.883	180	10	15.073	66	810	876	15.949
4) Consumer equipment	15.845	246	17	16.108	29	32	61	16.168
5a) Lighting equipment – luminaries	-	-	-	-	2	0	2	2
5b) Lighting equipment – light sources	421	1	0	421	199	11	210	631
6) Electrical and electronic tools	1.973	28	3	2.003	7	4	11	2.014
7) Toys, leisure and sports equipment	633	6	0	639	1	0	1	641
8) Medical devices	98	2	0	100	1	14	15	115
9) Monitoring and control instruments	127	2	0	129	1	13	13	142
10) Automatic dispensers	-	-	-	-	21	1	22	22
<b>Total</b>	<b>71.779</b>	<b>2.670</b>	<b>633</b>	<b>75.082</b>	<b>340</b>	<b>995</b>	<b>1.335</b>	<b>76.417</b>

2007 - stated in tonnes	WEEE collection from households				WEEE collection from businesses			Total WEEE collection
	Municipal collection sites	Collective scheme sites	Producers' collection	Total	Collective scheme sites	Producers' collection	Total	
1) Large household appliances	34.605	1.612	3.211	39.429	0	76	76	39.505
2) Small household appliances	3.855	23	401	4.278	1	0	2	4.280
3) IT and telecommunications equipment	13.418	101	350	13.869	5	754	759	14.628
4) Consumer equipment	15.538	206	180	15.923	2	31	32	15.956
5a) Lighting equipment – luminaries	-	-	-	-	71	0	71	71
5b) Lighting equipment – light sources	423	1	0	424	252	7	259	682
6) Electrical and electronic tools	1.936	12	0	1.948	1	19	20	1.968
7) Toys, leisure and sports equipment	1.047	6	158	1.211	1	2	3	1.215
8) Medical devices	98	1	0	99	0	15	15	114
9) Monitoring and control instruments	349	2	0	351	0	13	13	364
10) Automatic dispensers	-	-	-	-	3	7	10	10
<b>Total</b>	<b>71.269</b>	<b>1.964</b>	<b>4.300</b>	<b>77.533</b>	<b>336</b>	<b>924</b>	<b>1.260</b>	<b>78.793</b>

Kilde: DPA-System 09-09-2010

2006 (9 months) - stated in tonnes (7)	WEEE collection from households				WEEE collection from businesses			Total WEEE collection
	Municipal collection sites	Collective scheme sites	Producers' collection	Total	Collective scheme sites	Producers' collection	Total	
1) Large household appliances	27.868	1.152	143	29.163	1	88	88	29.251
2) Small household appliances	1.121	21	13	1.154	0	0	0	1.154
3) IT and telecommunications equipment	8.328	104	9	8.441	121	765	886	9.327
4) Consumer equipment	11.449	162	0	11.611	1	14	14	11.625
5a) Lighting equipment – luminaries	-	-	-	-	70	0	70	70
5b) Lighting equipment – light sources	238	0	0	238	202	9	210	448
6) Electrical and electronic tools	466	10	0	475	0	20	21	496
7) Toys, leisure and sports equipment	248	6	104	357	0	0	0	357
8) Medical devices	24	1	0	25	0	11	11	36
9) Monitoring and control instruments	66	2	0	68	0	5	5	73
10) Automatic dispensers	-	-	-	-	54	1	54	54
<b>Total</b>	<b>49.808</b>	<b>1.456</b>	<b>268</b>	<b>51.532</b>	<b>448</b>	<b>913</b>	<b>1.360</b>	<b>52.893</b>

Kilde: DPA-System 09-09-2010

**Notes:** (1) Collection of WEEE from households takes place in five fractions; fraction 2 covers the categories 2, 6, 7, 8, and 9. The remaining fractions are numbered in line with the categories of the WEEE Directive. The sharing key presented in Table 13 is used to break down fraction 2 in categories. (2) Municipal collection sites are sites registered by the local authority, from where producers must collect WEEE from households separated into five fractions. (3) Collective scheme sites have been established by the collective schemes of the producers, and WEEE can be disposed here according to the instructions of the producers. (4) WEEE collected/disposed directly with the producer. (5) For category 5a luminaires are covered by the producer responsibility for business end users, but not for household end users. (6) Category 10, automatic dispensers, is not considered as WEEE from households. (7) 2006 figures only cover nine months, since the obligation for collection only entered into force on 1 April 2006.



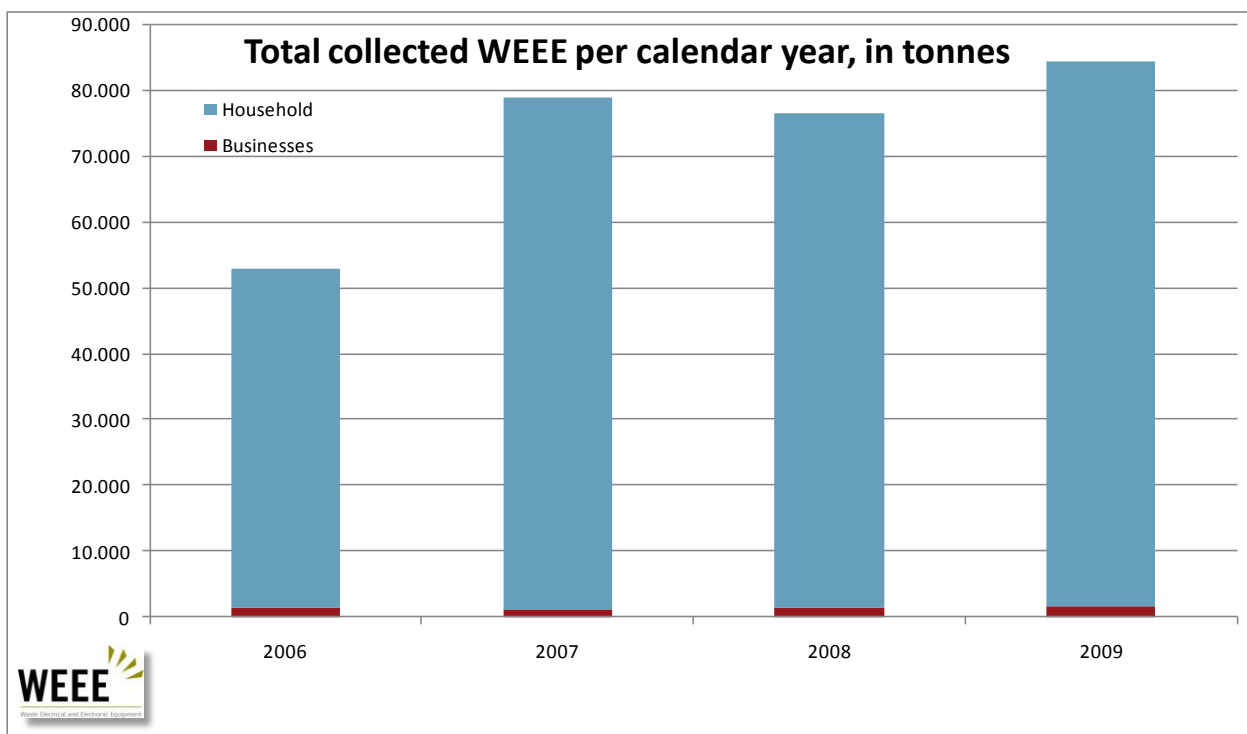
**Table 13. Sharing key for conversion of fraction 2 into categories**

Product	2006	2007	2008	2009
Category 2	53%	53%	65%	65%
Category 6	26%	26%	27%	27%
Category 7	14%	14%	6%	6%
Category 8	2%	2%	1%	1%
Category 9	5%	5%	1%	1%

Source: The sharing key is based on separation trials made by the collective schemes.

**Note:** No new separation trials have been carried out by the collective schemes, so the sharing key from 2008 has also been used for 2009.

**Figure 3. WEEE collection, total**



**Note:** 2006 covers a period of nine months

**Table 14. Geographical location of first treatment of WEEE**

2009 - stated in tonnes	Treatment, Denmark	Treatment EU, not Denmark	Treatment outside EU
1) Large household appliances	37.092	3	0
2) Small household appliances	5.500	187	0
3) IT and telecommunications equipment	5.537	8.871	0
4) Consumer equipment	14.345	7.816	18
5a) Lighting equipment – luminaries	4	0	0
5b) Lighting equipment – light sources	317	321	0
6) Electrical and electronic tools	2.308	0	1
7) Toys, leisure and sports equipment	880	0	0
8) Medical devices	122	2	0
9) Monitoring and control instruments	69	0	0
10) Automatic dispensers	0	0	0
<b>Total</b>	<b>66.174</b>	<b>17.200</b>	<b>19</b>

Source: DPA-System 09-09-2010

2008 - stated in tonnes	Treatment, Denmark	Treatment EU, not Denmark	Treatment outside EU
1) Large household appliances	32.329	3.583	9
2) Small household appliances	3.628	1.218	0
3) IT and telecommunications equipment	6.371	8.964	591
4) Consumer equipment	9.300	5.986	887
5a) Lighting equipment – luminaries	3	0	0
5b) Lighting equipment – light sources	175	401	0
6) Electrical and electronic tools	1.504	514	0
7) Toys, leisure and sports equipment	526	115	1
8) Medical devices	106	20	2
9) Monitoring and control instruments	136	19	0
10) Automatic dispensers	21	1	0
<b>Total</b>	<b>54.099</b>	<b>20.821</b>	<b>1.490</b>

Source: DPA-System 09-09-2010

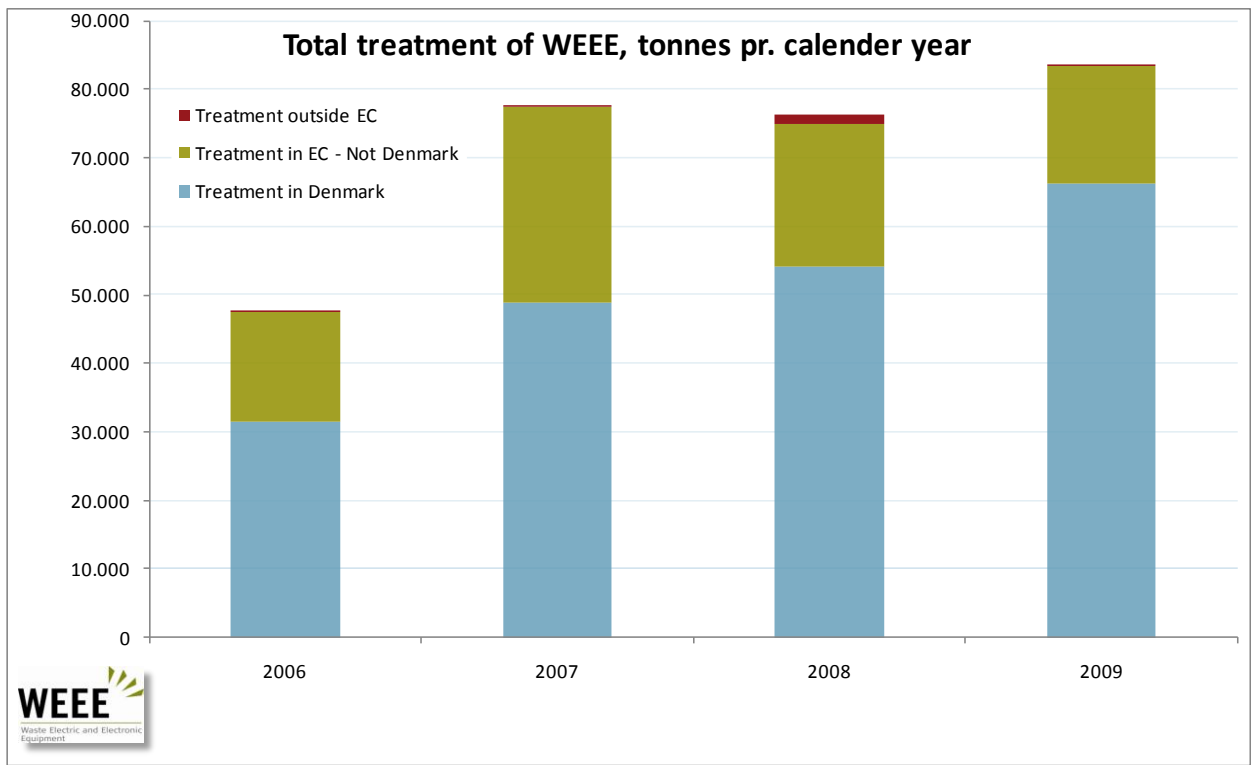
2007 - stated in tonnes	Treatment, Denmark	Treatment EU, not Denmark	Treatment outside EU
1) Large household appliances	28.136	10.699	0
2) Small household appliances	3.247	1.414	0
3) IT and telecommunications equipment	6.689	7.069	0
4) Consumer equipment	8.107	7.852	0
5a) Lighting equipment – luminaries	72	0	0
5b) Lighting equipment – light sources	288	373	0
6) Electrical and electronic tools	1.238	732	0
7) Toys, leisure and sports equipment	670	327	0
8) Medical devices	79	41	0
9) Monitoring and control instruments	245	140	0
10) Automatic dispensers	19	0	0
<b>Total</b>	<b>48.789</b>	<b>28.646</b>	<b>1</b>

Source: DPA-System 09-09-2010

2006 (9 months) - stated in tonnes	Treatment, Denmark	Treatment EU, not Denmark	Treatment outside EU
1) Large household appliances	15.736	9.830	0
2) Small household appliances	1.048	153	0
3) IT and telecommunications equipment	5.621	3.574	0
4) Consumer equipment	7.714	2.287	0
5a) Lighting equipment – luminaries	70	1	0
5b) Lighting equipment – light sources	290	147	0
6) Electrical and electronic tools	472	64	0
7) Toys, leisure and sports equipment	255	30	0
8) Medical devices	33	3	0
9) Monitoring and control instruments	74	8	0
10) Automatic dispensers	54	0	0
<b>Total</b>	<b>31.368</b>	<b>16.099</b>	<b>1</b>

**Notes:** Figures show where WEEE was subjected to the first treatment operation. Further treatment may take place elsewhere. In this statement, no distinction has been made between household WEEE and business WEEE.

**Figure 4. Geographical location of first treatment of WEEE, total**



**Note:** 2006 covers a period of nine months

**Table 15. Treatment option for WEEE compared with EU targets (1)**

2009 - stated in tonnes	Disposal (2)		Recovery (3)			Reuse and recycling		
	Tonnes	Percent	Tonnes	Percent	EU Target	Tonnes	Percent	EU Target
1) Large household appliances	6.404	17%	30.691	83%	80%	28.877	78%	75%
2) Small household appliances	326	6%	5.361	94%	70%	4.795	84%	50%
3) IT and telecommunications equipment	638	4%	13.769	96%	75%	12.879	89%	65%
4) Consumer equipment	902	4%	21.278	96%	75%	19.688	89%	65%
5a) Lighting equipment – luminaries	1	17%	3	83%	70%	3	72%	50%
5b) Lighting equipment – light sources	7	1%	631	99%	80%	611	96%	50%
6) Electrical and electronic tools	80	3%	2.230	97%	70%	1.964	85%	50%
7) Toys, leisure and sports equipment	29	3%	851	97%	70%	749	85%	50%
8) Medical devices	5	4%	120	96%	70%	106	85%	50%
9) Monitoring and control instruments	5	8%	64	92%	70%	56	81%	50%
10) Automatic dispensers	0	100%	0	0%	80%	0	0%	75%
<b>Total</b>	<b>8.396</b>		<b>74.998</b>			<b>69.726</b>		

Source: DPA-System 09-09-2010

2008 - stated in tonnes	Disposal		Recovery			Reuse and recycling		
	Tonnes	Percent	Tonnes	Percent	EU Target	Tonnes	Percent	EU Target
1) Large household appliances	5.157	14%	30.765	86%	80%	27.171	76%	75%
2) Small household appliances	529	11%	4.316	89%	70%	4.068	84%	50%
3) IT and telecommunications equipment	1.330	8%	14.596	92%	75%	13.514	85%	65%
4) Consumer equipment	1.051	6%	15.123	94%	75%	14.507	90%	65%
5a) Lighting equipment – luminaries	1	24%	2	76%	70%	2	74%	50%
5b) Lighting equipment – light sources	4	1%	572	99%	80%	565	98%	50%
6) Electrical and electronic tools	225	11%	1.793	89%	70%	1.689	84%	50%
7) Toys, leisure and sports equipment	72	11%	569	89%	70%	535	84%	50%
8) Medical devices	23	18%	105	82%	70%	98	77%	50%
9) Monitoring and control instruments	32	21%	124	79%	70%	114	73%	50%
10) Automatic dispensers	3	13%	19	87%	80%	18	82%	75%
<b>Total</b>	<b>8.427</b>		<b>67.983</b>			<b>62.281</b>		

2007 - stated in tonnes	Disposal		Recovery			Reuse and recycling		
	Tonnes	Percent	Tonnes	Percent	EU Target	Tonnes	Percent	EU Target
1) Large household appliances	5.018	13%	33.817	87%	80%	32.051	83%	75%
2) Small household appliances	322	7%	4.340	93%	70%	3.912	84%	50%
3) IT and telecommunications equipment	951	7%	12.807	93%	75%	11.350	82%	65%
4) Consumer equipment	1.399	9%	14.559	91%	75%	13.318	83%	65%
5a) Lighting equipment – luminaries	11	15%	60	85%	70%	60	85%	50%
5b) Lighting equipment – light sources	9	1%	652	99%	80%	645	98%	50%
6) Electrical and electronic tools	140	7%	1.831	93%	70%	1.635	83%	50%
7) Toys, leisure and sports equipment	68	7%	929	93%	70%	833	83%	50%
8) Medical devices	12	10%	107	90%	70%	95	80%	50%
9) Monitoring and control instruments	31	8%	354	92%	70%	316	82%	50%
10) Automatic dispensers	16	84%	3	16%	80%	3	14%	75%
<b>Total</b>	<b>7.977</b>		<b>69.459</b>			<b>64.219</b>		

Source: DPA-System 09-09-2010

2006 (9 months) - stated in tonnes	Disposal		Recovery			Reuse and recycling		
	Tonnes	Percent	Tonnes	Percent	EU Target	Tonnes	Percent	EU Target
1) Large household appliances	889	3%	24.678	97%	80%	22.562	88%	75%
2) Small household appliances	54	5%	1.147	95%	70%	983	82%	50%
3) IT and telecommunications equipment	823	9%	8.372	91%	75%	7.349	80%	65%
4) Consumer equipment	912	9%	9.089	91%	75%	7.911	79%	65%
5a) Lighting equipment – luminaries	11	15%	61	85%	70%	61	85%	50%
5b) Lighting equipment – light sources	11	3%	426	97%	80%	426	97%	50%
6) Electrical and electronic tools	24	4%	513	96%	70%	438	82%	50%
7) Toys, leisure and sports equipment	10	4%	275	96%	70%	232	81%	50%
8) Medical devices	6	16%	30	84%	70%	26	72%	50%
9) Monitoring and control instruments	6	7%	77	93%	70%	64	78%	50%
10) Automatic dispensers	2	4%	52	96%	80%	43	80%	75%
<b>Total</b>	<b>2.748</b>		<b>44.719</b>			<b>40.096</b>		

Source: DPA-System 09-09-2010

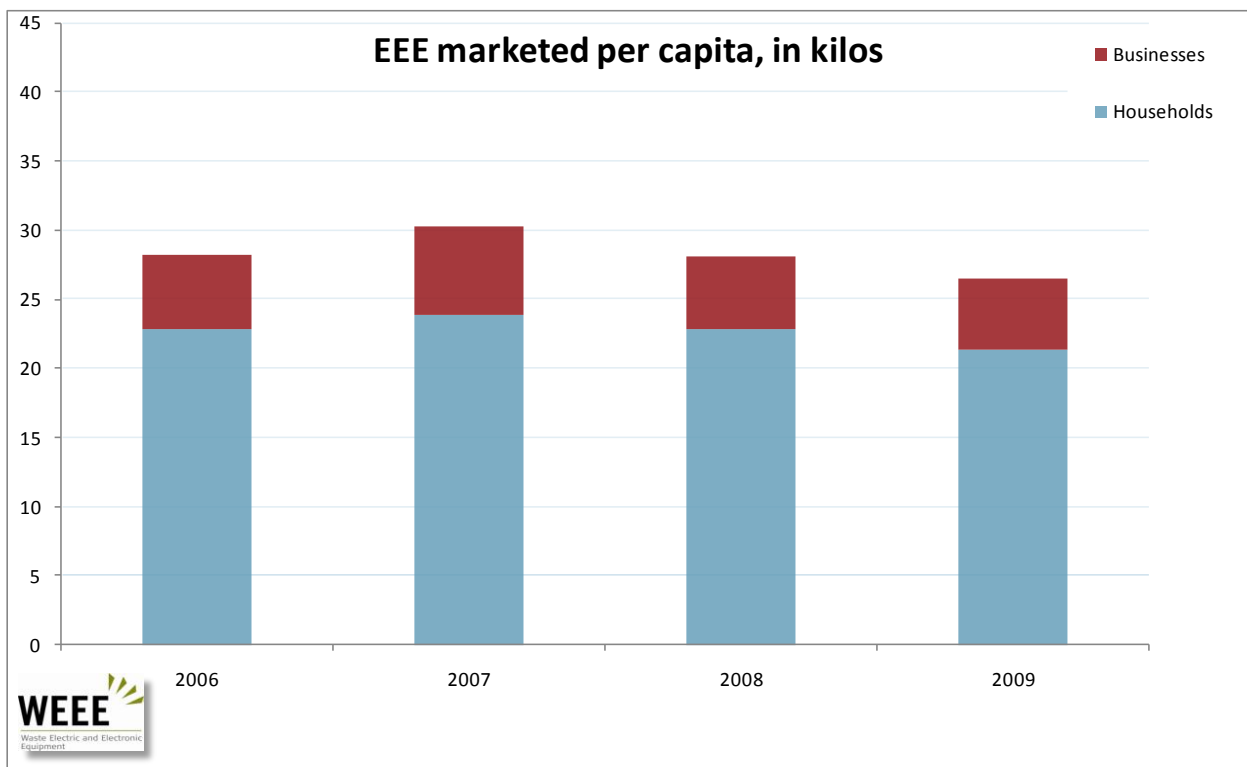
**Notes:** (1) In this statement, no distinction has been made between household WEEE and business WEEE. (2) Disposal means that WEEE is landfilled or incinerated without energy recovery. (3) Recovery is the sum of the treatment options of waste incineration with energy recovery, recycling, and reuse. EU percentage target for treatment as stipulated in the WEEE Directive 2002/96/EC.

**Table 16. EEE marketed per capita**

EEE marketed per capita in Denmark, stated in kilos			
	Households	Businesses	Total
<b>2006</b>	23	5	28
<b>2007</b>	24	6	30
<b>2008</b>	23	5	28
<b>2009</b>	21	5	26

Source: DPA-System 09-09-2010

**Figure 5. EEE marketed per capita and year**

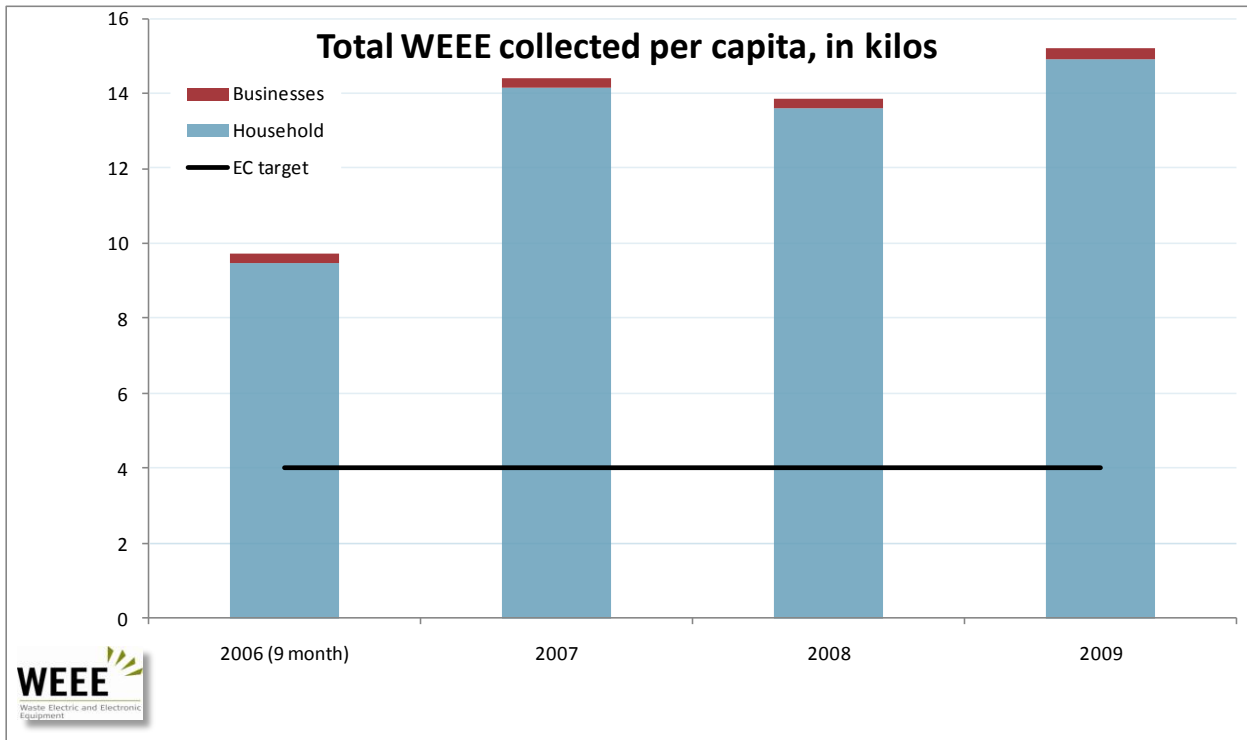


**Table 17. WEEE collection per capita compared with EU targets**

Collected WEEE per capita in Denmark, stated in kilos				EU Target
	Households	Businesses	Total	
<b>2006 (9 months)</b>	9	0,3	<b>10</b>	4
<b>2007</b>	14	0,2	<b>14</b>	4
<b>2008</b>	14	0,2	<b>14</b>	4
<b>2009</b>	15	0,3	<b>15</b>	4

Source: DPA-System allocation basis 20-04-2009

Figure 6. WEEE collected per capita and year







## Producer data in BAT Register

BAT Register is the producer responsibility register for producers and importers of batteries and accumulators.

**Table 18. Producers and importers in BAT Register**

BAT Register outline (2010)		
	Number	Percent
Total number of registrations (1)	694	
Individual compliers (2)	170	24%
Members of collective schemes	524	76%
<b>Collective schemes:</b>		
Elretur	448	86%
ERP	16	3%
RENE AG	23	4%
ReturBat	37	7%

Source: DPA-System 09-09-2010

**Notes:** (1) Number of producers registered in DPA-System's BAT Register. (2) Individual compliers are predominantly producers not marketing portable batteries.

**Table 19. Producers and importers per battery category**

Number of BAT registrations per category (2010)	
	Number
1) Portable batteries	555
2) Industrial batteries	140
3) Automotive batteries	82

Source: DPA-System 09-09-2010

**Notes:** Number of producers within each of the three battery categories stating that they have marketed batteries in this category. A producer can be active in more than one category

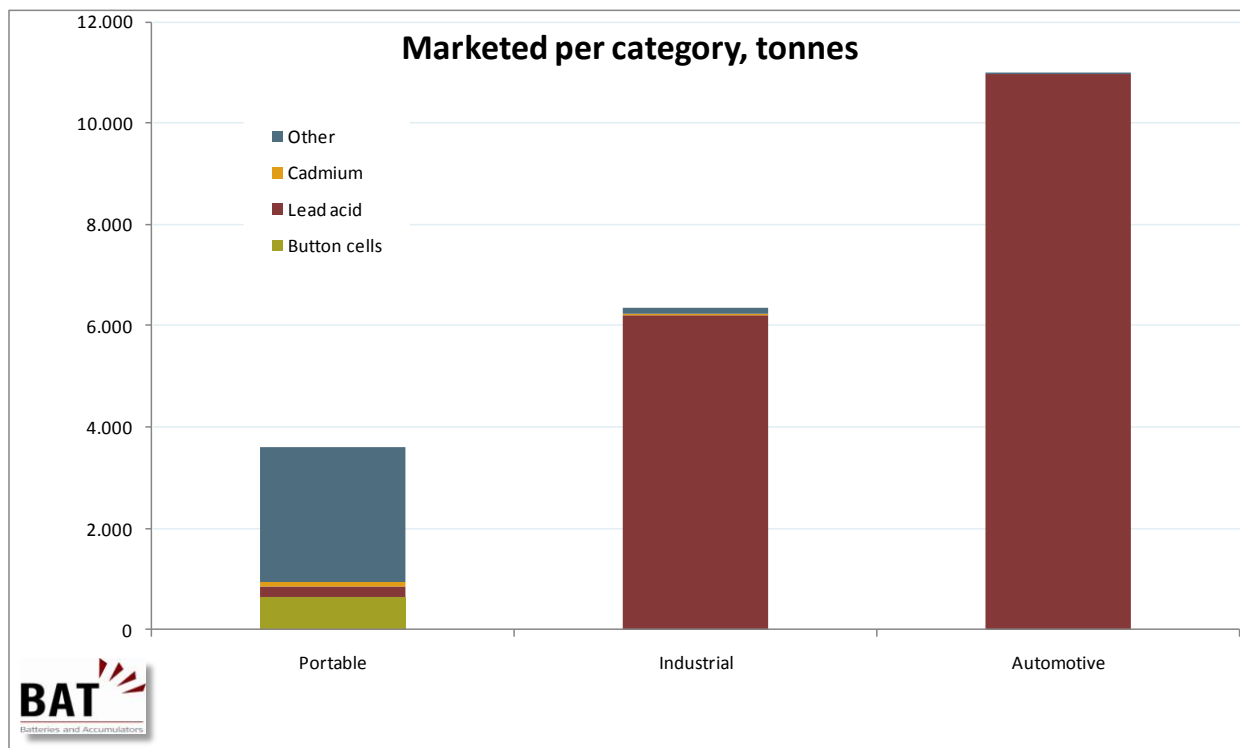
**Table 20. Batteries put on market**

2009- stated in tonnes	Button cells	Lead acid	Nickel-Cadmium	Other	Marketed - Total
Portable batteries	645	198	113	2.657	3.613
Industrial batteries	-	6.202	45	122	6.369
Automotive batteries	-	10.969	0	17	10.986
Total	645	17.370	158	2.796	20.968

Source: DPA-System 09-09-2010

**Notes:** Figures are sums from producers' annual reports to DPA-System. This is the first year of actually marketed volumes in kilos. It appears that the volume of industrial batteries sold is the double of portable battery volumes; the volume of automotive batteries is the triple of that of portable batteries.

**Figure 7. Batteries put on market per type and per substance group**



**Table 21 . Collected waste batteries per type**

2009- stated in tonnes	Collected batteries			
	Municipal collection sites	Collective scheme sites	Producers' collection	Total BAT collected
Portable batteries	1.199	206	1	1.406
Industrial batteries	0	4.749	4.376	9.125
Automotive batteries	0	7.657	28	7.685
<b>Total</b>	<b>1.199</b>	<b>12.612</b>	<b>4.404</b>	<b>18.216</b>

Source: DPA-System 09-09-2010

**Table 22. Waste batteries sent to treatment**

2009 – stated in tonnes	Treated
Button cells Hg	4
Lead acid	13.941
Nickel-Cadmium	76
Others	1.105
<b>Total</b>	<b>15.126</b>

Source: DPA-System 09-09-2010

**Table 23. Registered treatment facilities for treatment of waste batteries**

Treatment facility	Country	Treatment facility	Country
• AFE Valdi SAS	France	• Johnson Controls Recycling GmbH	Germany
• BAGSVÆRD JERNHANDEL A/S	DK	• MARIUS PEDERSEN A/S	DK
• Boliden Bergsøe AB	Sweden	• RECIPROTOR A/S	DK
• CITRON SA	France	• SAFT	Sweden
• DANBRIT AKKUMULATOR AALBORG A/S	DK	• SIMS Recycling Solutions	Netherland
• DANSK SPECIAL AFFALD A/S	DK	• STENA JERN & METAL A/S	DK
• FOXDAL GRUPPEN A/S	DK	• SYDJYDSK INDUSTRITEKNIK I VEJEN ApS	DK
• H.J. HANSEN GENVINDINGSINDUSTRI A/S	DK	• Umicore	Sweden
• JERNPLADSEN A/S	DK	• Vårst Metalgenbrug A/S	DK

**Notes:** Producers must register which companies they use for treatment of the waste batteries. The reason is that there are requirements for the effectiveness of treatment facilities' recycling of the raw materials from the batteries. Only plants that attain an efficiency rate of 65% for lead acid batteries, 75% for nickel-cadmium batteries and 50% of other batteries can be used. From the table above it is clear that some producers / importers have misunderstood the kind of information demanded. Only companies marked in grey are actual treatment facilities for waste batteries. The remaining company names represent collectors or commercial enterprises for waste batteries.



# Appendix 1: Issues influencing reported data on WEEE and BAT

Below, some of the issues affecting data collection in the WEEE and BAT field and thus influencing the annual WEEE and BAT statistics 2009 are described.

## **Municipal data**

By contrast to last year municipal data are new and fully updated. The reason is that the revised Statutory Order with its new waste fractions meant that all local authorities had to update their basic data and information about equipment needs before 1 September 2010 from which date collection was to be carried out according to the new waste fractions.

## **Marketed volumes – conversion factors**

Statutory requirements for reporting of marketed volumes cover exact weight in kilos. It should be noted that some collective schemes have instead used conversion factors/average weight for estimation of marketed volumes of equipment (in kg). This means that producers in these collective schemes have not stated the exact weight in kilos since data are reported through the collective schemes. DPA-System does not carry out validation of such conversion factors.

The use of conversion factors was banned from 1 January 2010 further to a decision made by the Danish Environmental Protection Agency. This means that the uncertainty regarding data for marketed volumes due to conversion factors should be eliminated in the future.

## **Marketed volumes – auditors' attestations**

Reports of marketed volumes of electrical equipment for use in households must be attested by an auditor cf. the WEEE Order. These data should thus have a higher level of quality assurance than data for equipment used in businesses.

To make it cheaper and easier for producers to comply with the requirement for auditors' attestations a national audit standard was prepared in 2007 by the Danish Environmental Protection Agency and the Federation of Danish Accountants. Again in 2010 this standard was to be used for quality assurance of marketed volumes of equipment for use in households. Below follows an indication of the quality of marketed volume data based on auditors' attestations.

The number of attestations received is at the same level as last year. Thus, more than half the companies have still not submitted an auditors' attestation. A total of 529 companies were to submit an auditors' attestation in 2010. As per 1 August 2010 DPA-System had received a total of 248 attestations, corresponding to 47 % of those that had to be submitted further to the Order. The quality of the attestations has increased slightly, but the attestations still document many deviations.

Of the auditors' attestations received 60 % of the auditors have noted for 2009 that there are deviations from what was expected, while only 40 % of attestations show full agreement between what is noted in the auditors' attestation and what has been reported in the DPA-System register.

Just as we expect improved data quality due to the fact that it is no longer permitted to use conversion factors we also expect that auditors' checks will become more efficient for 2010 reports since reporting will become electronic.

## **Collected volumes – conversion factors**

Conversion from fraction into category for equipment for use in households is done according to the conversion factors stated in Table 13.

## **Collected volumes – business WEEE**

It appears from Table 12 that relatively small volumes of business WEEE have been collected compared with WEEE from households. There are four main reasons for this:

### **1. Historical business WEEE.**

Only business WEEE from products marketed from 2006 onwards is covered by the producer responsibility. WEEE from equipment marketed before 2006 will thus not appear from WEEE Statistics. For household WEEE so-called historical WEEE (from equipment marketed before 2006) is included in total volumes, since all WEEE from private households is collected, regardless of the year it was marketed.

## **2. Own import of electrical equipment and associated WEEE.**

Businesses importing electrical equipment for their own use are not subject to producer responsibility in terms of registration and reporting to DPA-System. This means that WEEE from such equipment is not reported to DPA-System and will thus not be included in WEEE Statistics.

## **3. WEEE from business end users not returned to producers subject to producer responsibility.**

Business end users managing WEEE from equipment covered by the producer responsibility scheme have the right to deliver this WEEE to producers of this equipment. Business end users, however, are not obliged to deliver WEEE to the producer. If this WEEE is not delivered to the producer, these volumes will not be included in WEEE Statistics.

## **4. Producers can transfer the collection obligation for WEEE to a subsequent marketing stage.**

Producers subject to producer responsibility for products used only by businesses may transfer the obligation for collection and treatment of WEEE from these products. Subsequent marketing stages are not obliged to report these volumes of WEEE to DPA-System. Therefore, these volumes will not be included in WEEE Statistics.

### **Portable batteries: Reporting of data.**

Legislation on producer responsibility for batteries entered into force with such short notice that affected producers did not have sufficient time to study the rules, including reporting requirements. This is probably a significant reason for the data uncertainty appearing after the first year of realised marketed volumes.

A tax has been introduced on portable batteries placed on the market in Denmark. The tax is levied by SKAT (Danish Tax and Customs Administration) in line with other excise duties. This means that producers and importers must report volumes of portable batteries placed on the market to SKAT once a year and no later than 15 February.

In addition to the tax producers are also subject to producer responsibility for all types of batteries (industrial, automotive and portable). This means that they must register in the DPA-System producer register and report to DPA-System annually on volumes of batteries placed on the market and volumes of waste batteries collected.

For portable batteries the Danish Environmental Protection Agency and SKAT have agreed that DPA-System will receive data from SKAT on volumes of portable batteries placed on the market. In this way producers will not have to report portable batteries data twice.

However, it has turned out that some producers have registered for the producer responsibility with DPA-System, but have not reported data to SKAT before the 15 February deadline. This means that quantitative data cannot be transferred for all registered producers from SKAT to DPA-System. Thus, some registered producers have not complied with their tax liability and their producer responsibility since they have not reported to SKAT.

In connection with registration of volumes of collected waste batteries some uncertainty has arisen due to the above problem for the collective schemes when they are to distribute collected volumes among their members: it is not clear whether producers not complying with their producer responsibility must register a share of collected volumes that was originally allocated to them.

Furthermore, a problem has occurred regarding collective schemes' computing of collected volumes of batteries. These must be stated, distributed and reported per producer. Also, collected volumes must be stated per collection site. It has turned out that there is no agreement between these two statements, which in principle cover the same volumes.

### **Summary for data quality for WEEE and BAT**

Considerable uncertainty factors affect the quality of data.

For WEEE it is presumed that the requirement for statement of exact weight of equipment and submission of auditors' attestation in electronic form will contribute to a reduction of the uncertainty for volumes placed on the market.

Each individual producer is responsible for the accuracy of reported data. DPA-System has recently established an electronic yearly statement of total reporting per producer. This allows producers to check data accuracy whether these data are reported by one or more collective schemes cooperating with the producer. Thus, we hope with this to achieve higher accuracy of reports from the producers.

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