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Lot 23

**Domestic and commercial hobs and grills,
included when incorporated in cookers**

Task 2: Economic and Market Analysis

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In association with


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2. TASK 2 – ECONOMIC AND MARKET ANALYSIS

The purpose of this task is to present the economic and market analysis related to domestic and commercial hobs and grills within the framework of Lot 23 Ecodesign preparatory study. The aim of the report is firstly to place this product group within the context of EU industry and trade policy. Secondly, it provides market (sales and stock) and cost inputs for the assessment of EU-wide environmental impacts of the product group. Thirdly, it aims at providing insights into the latest market trends in order to identify market structures and ongoing trends in product design. This market data will serve as an input for subsequent tasks such as base-case analysis and improvement potential (Tasks 5 and 7 respectively). Finally, the data on consumer prices and rates is to be used later in the study in Life Cycle Cost (LCC) calculations.

2.1. GENERIC ECONOMIC DATA

The sector for commercial and domestic hobs and grills is very fragmented and produces equipment and components with a variety of applications. For this subtask, the Prodcom Annual Data on manufactured goods (in number of units) was extracted for the year 2008. The Prodcom statistics have the advantage of being the official EU-source that is also used and referenced in other EU policy documents regarding trade and economic policy, thus guaranteeing EU consistency. Prodcom data is based on products whose definitions are standardised across the European community and thus allow comparability between Member State data. However, as mentioned in section 1.1 under product definition, Prodcom classification of Lot 23 products is not detailed enough to cover all the products identified in Task 1. The categories that include Lot 23 products are presented in Table 2-1 and the analysis that follows for this section is developed according to them.

Table 2-1: Prodcom categories for domestic hobs and grills

NACE 27.51	Manufacture of electric domestic appliances
CPA 27.51.28	Other ovens; cookers, cooking plates, boiling rings; grillers, roasters
27.51.28.10	Domestic electric cookers with at least an oven and a hob (including combined gas-electric appliances)
27.51.28.33	Domestic electric hobs for building-in
27.51.28.35	Domestic electric cooking plates, boiling rings and hobs (excluding hobs for building-in)
27.51.28.50	Domestic electric grills and roasters

NACE 27.52	Manufacture of non-electric domestic appliances
CPA27.52.11	Domestic cooking appliances and plate warmers, of iron or steel or of copper, non electric
27.52.11.13	Iron or steel gas domestic cooking appliances and plate warmers, with an oven (including those with subsidiary boilers for central heating, separate ovens for both gas and other fuels)
27.52.11.15	Iron or steel gas domestic cooking appliances and plate warmers (including those with subsidiary boilers for central heating, for both gas and other fuels; excluding those with ovens)

For each of the six listed categories, data was retrieved in order to give an idea of the product group within the total EU industry for the year 2008. The results are presented in the following subsections.

2.1.1. DOMESTIC ELECTRIC RANGE COOKERS

The production and trade values for domestic electric range cookers are presented in Table 2-2. During 2008, the market for goods produced in this category reached over 1,200 million Euros and units exported had a value of 239 million Euros.

Table 2-2: EU Production, Imports/Exports of domestic electric cookers in 2008

TOTALS (Thousands of units)	EXPORTS	IMPORTS	PRODUCTION	APPARENT CONSUMPTION*
EU-25	1221.0	1533.6	4597.5	4910.1
EU-27	1193.1	1333.9	4629.0	4769.8

*Calculated value from Production, Imports, Exports

Table 2-3 provides information on the production and trade of domestic electric range cookers (in numbers of units) in the MS. It can be seen that the main players in the production sector were the UK, Germany, Poland and Italy, which accounted for more than 80% of all the units produced in the EU in 2008. In addition, these countries also hold the main share (73%) for purchased goods in the same year with France acting as an additional main player accounting for another 9%.

Table 2-3: Domestic electric range cookers: production and trade in 2008
(millions of Euros)

COUNTRY	EXPORTS	IMPORTS	PRODUCTION
Austria	17.5	19.9	*
Belgium	2.1	16.3	0.0
Bulgaria	1.0	17.8	3.3
Cyprus	0.0	0.9	0.0
Czech Republic	3.3	10.8	*
Denmark	14.8	34.6	0.0
Estonia	0.5	3.9	0.0
Finland	19.2	26.1	15.2
France	16.1	68.4	41.9
Germany	67.7	91.2	247.5
Greece	4.4	26.4	*
Hungary	4.7	11.0	*
Ireland	2.4	22.2	*
Italy	88.3	25.3	230.3
Latvia	0.9	3.9	0.0
Lithuania	0.9	7.1	0.0
Luxemburg	0.1	1.4	0.0
Malta	0.0	0.2	0.0
Netherlands	4.0	17.1	0.0
Poland	240.3	18.4	350.6
Portugal	3.9	4.4	6.0
Romania	48.0	1.3	*
Slovakia	0.2	9.9	*
Slovenia	83.1	2.5	*
Spain	22.7	15.1	*
Sweden	33.2	66.6	*
United Kingdom	17.0	127.2	200.1
EU-25 TOTAL	245.5	182.1	1,223.2
EU-27 TOTAL	239.0	146.0	1,226.5

*Confidential value or not available.

2.1.2. DOMESTIC ELECTRIC HOBS

The apparent consumption of built-in domestic electric hobs in the EU in 2008 is more than twice the number reported for domestic electric range cookers (totals are presented in Table 2-4). This suggests that the sales of built-in appliances for cooking purposes are higher than those of free-standing units as in previous years. Data retrieved from the same database shows that Germany, Italy, Spain and France are the main producers. Although other countries that could be relevant such as UK or Poland did not provide any information, 12 million units are produced at EU level.

Table 2-4: EU Production, Imports/Exports of built-in domestic electric hobs in 2008

TOTALS (Thousands of units)	EXPORTS	IMPORTS	PRODUCTION	APPARENT CONSUMPTION*
EU-25	1,365.5	2,632.8	12,000.0	13,267.3
EU-27	1,302.4	2,655.3	12,000.0	13,353.0

*Calculated value from Production, Imports, Exports.

The production and trade values for built-in domestic electric hobs are presented in Table 2-5. In 2008, the market of goods produced in this category reached nearly 1,500 million Euros and exported units had a value of 225 million Euros.

**Table 2-5: Built-in domestic electric hobs: production and trade in 2008
(millions of Euros)**

COUNTRY	EXPORTS	IMPORTS	PRODUCTION
Austria	13.4	28.1	*
Belgium	2.8	42.5	*
Bulgaria	0.9	8.2	*
Cyprus	*	*	0.0
Czech Republic	8.1	15.4	*
Denmark	9.1	29.6	0.0
Estonia	0.1	2.1	0.0
Finland	17.8	15.7	0.0
France	48.7	107.9	106.2
Germany	295.8	123.3	538.6
Greece	1.7	28.1	*
Hungary	2.8	9.0	0.0
Ireland	2.3	8.5	*
Italy	207.4	28.1	319.9
Latvia	0.1	1.8	0.0
Lithuania	0.8	5.4	0.0
Luxemburg	0.3	3.3	0.0
Malta	0.0	0.3	0.0
Netherlands	21.4	37.3	*

COUNTRY	EXPORTS	IMPORTS	PRODUCTION
Poland	29.2	33.5	*
Portugal	0.4	12.1	2.6
Romania	0.0	2.9	0.0
Slovakia	1.8	4.3	0.0
Slovenia	33.2	8.3	*
Spain	103.1	15.6	383.7
Sweden	24.4	51.7	0.0
United Kingdom	4.6	63.9	*
EU-25 TOTALS	233.0	28.0	1,495.7
EU-27 TOTALS	224.8	29.5	1,495.8

*Confidential value or not available.

2.1.3. DOMESTIC ELECTRIC COOKING PLATES, BOILING RINGS AND HOBS (EXCLUDING HOBS FOR BUILDING-IN)

This Prodcom category mainly refers to domestic free-standing electric hobs which include cooking plates also named “solid plates” and boiling rings referring to radiant boiling plates. The number of units consumed in this category is in the same order of magnitude as for domestic electric range cookers and three times less than their built-in counterparts: around 4 million units were sold in the EU in 2008. Information from producers is not available for most countries but the reported data shows that Italy accounts for nearly 70% of all the units produced in the EU. As shown in Table 2-6 below, most of the electric hobs consumed in the EU are imported. The production and trade values for domestic electric hobs (excluding built-in hobs) presented in Table 2-7, also support the fact that the production market of these appliances in the EU is small compared to other categories. In 2008, the market of domestic electric cooking plates, boiling rings and hobs (excluding hobs for building-in) reached 53 million Euros where exported units had a value of 18 million Euros.

Table 2-6: EU Production, Imports/Exports of domestic electric hobs (excluding built-in hobs) in 2008

TOTALS (Thousands of units)	EXPORTS	IMPORTS	PRODUCTION	APPARENT CONSUMPTION*
EU-25	246.6	3,377.4	807.0	3,937.9
EU-27	206.7	3,464.5	821.4	4,079.3

*Calculated value from Production, Imports, Exports.

Table 2-7: Domestic electric hobs (excluding built-in hobs): Production and trade in 2008 (millions of Euros)

COUNTRY	EXPORTS	IMPORTS	PRODUCTION
Austria	2.4	1.8	*
Belgium	3.0	3.7	0.0
Bulgaria	0.2	1.2	0.1
Cyprus	*	*	0.0
Czech Republic	0.6	3.8	*
Denmark	0.5	3.3	0.0
Estonia	0.1	0.5	0.0
Finland	0.4	2.2	0.0
France	2.5	11.0	*
Germany	9.9	19.4	4.2
Greece	0.1	2.5	0.3
Hungary	0.1	1.5	*
Ireland	0.0	0.6	0.0
Italy	13.6	6.5	42.4
Latvia	0.1	0.8	0.0
Lithuania	0.9	0.5	0.0
Luxemburg	0.0	0.3	0.0
Malta	0.0	0.0	0.0
Netherlands	1.6	4.4	*
Poland	3.5	6.7	*
Portugal	0.4	1.2	*
Romania	0.1	1.2	0.0
Slovakia	0.4	1.7	0.0
Slovenia	0.3	0.8	*
Spain	5.8	4.9	*
Sweden	0.5	1.9	0.0
United Kingdom	0.7	12.4	0.0
EU-25 TOTALS	18.6	53.3	53.4
EU-27 TOTALS	17.9	54.4	53.5

*Confidential value or not available.

2.1.4. DOMESTIC ELECTRIC GRILLS AND ROASTERS

For this category which refers to domestic free-standing electric grills, the bulk of products come from outside the EU as can be seen in Table 2-8; imported units accounted for 98% of the apparent consumption during 2008. The market is also significant, in the same order of magnitude as domestic electric hobs, reaching more than 10 million units sold.

Table 2-8: EU Production, Imports/Exports of domestic electric grills and roasters during 2008

TOTALS (Thousands of units)	EXPORTS	IMPORTS	PRODUCTION	APPARENT CONSUMPTION*
EU-25	447.7	10,002.7	702.8	10,257.8
EU-27	370.2	10,086.9	778.4	10,495.2

*Calculated value from Production, Imports, Exports.

The production and trade values for domestic electric grills and roasters are presented in Table 2-9. During 2008 the market for goods produced in this category was 57 million Euros and for imported units 122 million Euros.

Table 2-9: Domestic electric grills and roasters: production and trade in 2008 (millions of Euros)

COUNTRY	EXPORTS	IMPORTS	PRODUCTION
Austria	4.6	7.9	0.0
Belgium	10.6	16.2	0.0
Bulgaria	0.0	1.6	0.7
Cyprus	*	*	0.0
Czech Republic	0.9	3.9	*
Denmark	0.3	0.9	0.0
Estonia	0.1	0.3	0.0
Finland	0.3	1.4	*
France	10.1	22.1	1.7
Germany	26.6	41.6	17.0
Greece	3.4	8.1	0.4
Hungary	0.9	1.8	0.0
Ireland	0.1	1.9	0.0
Italy	4.5	11.1	32.9
Latvia	0.0	0.4	0.0
Lithuania	0.0	0.6	0.0
Luxemburg	0.0	0.7	0.0
Malta	0.0	0.1	0.0
Netherlands	13.4	20.9	0.0
Poland	0.5	3.9	*

COUNTRY	EXPORTS	IMPORTS	PRODUCTION
Portugal	4.9	3.0	2.0
Romania	0.2	1.2	*
Slovakia	0.2	2.8	*
Slovenia	0.4	0.8	0.0
Spain	6.6	18.7	*
Sweden	1.8	3.8	0.0
United Kingdom	1.7	18.3	0.0
EU-25 TOTALS	15.9	121.0	*
EU-27 TOTALS	13.7	121.9	57.1

*Confidential value or not available.

Many grills are sold as integral part of domestic built-in ovens and in range cookers and so not accounted for in Table 2-8 or Table 2-9. Most range cookers and built-in ovens will include one grill. Electric grills used in built-in electric ovens may also be used to heat the oven but other types are used solely as grills.

2.1.5. DOMESTIC GAS COOKING APPLIANCES AND PLATE WARMERS (WITH AN OVEN)

Trade data for gas domestic cooking appliances is presented in Table 2-10. In this category there is no segmentation between ovens or hobs, built-in units or free-standing, thus the sole purpose here is to present a picture of the size of the market without any further analysis. Nearly 50% of the production for this category inside the EU is represented by the UK and Italy. The main consumers appear to be UK and France with an almost 50% share of apparent consumption.

Table 2-10: EU Production, Imports/Exports of domestic cooking appliances (with oven) in 2008

TOTALS (Thousands of units)	EXPORTS	IMPORTS	PRODUCTION	APPARENT CONSUMPTION*
EU-25	1563.2	872.7	2700.9	2010.4
EU-27	1520.5	839.6	3300.9	2620.0

*Calculated value from Production, Imports, Exports.

2.1.6. DOMESTIC GAS COOKING APPLIANCES AND PLATE WARMERS (WITHOUT AN OVEN)

Following the same reasoning as for the previous category, no further analysis can be done since this category covers a wide range of products for both Lots 22 and 23. Table 2-11 shows that more than 7 million units were sold in the EU in 2008. Although data

from producers is scarce, Italy holds 69% of the total estimated production in the EU, being a key player in the manufacturing business.

Table 2-11: EU Production, Imports/Exports of domestic cooking appliances (without an oven) in 2008

TOTALS (Thousands of units)	EXPORTS	IMPORTS	PRODUCTION	APPARENT CONSUMPTION*
EU-25	1,980.5	5,220.6	3,671.6	6,911.8
EU-27	1,893.7	5,490.5	3,691.6	7,288.4

*Calculated value from Production, Imports and Exports.

2.1.7. COMMERCIAL SECTOR

Information on the trade of commercial cooking appliances is not available for the EU in general. Details on information gathered for some MS as well as estimations at EU level are presented in the section 2.2.2.

2.2. MARKET AND STOCK DATA OF HOBS AND GRILLS

2.2.1. DOMESTIC APPLIANCES

Information at the EU level, as well as data retrieved by Member States is presented in the following sections. Sales data at EU level was gathered from two main sources: databases from GfK Retail and Technology GmbH covering sales in 2007 and the European Committee of Domestic Equipment Manufacturers (CECED) databases covering sales in 2008. At MS level, the UK and France provided a comprehensive source of data, which are relevant since they are important consumers in the market of cooking appliances as previously presented in section 2.1.

2.2.1.1 SALES DATA

■ EU Level

➤ Distribution per Energy Source

A first analysis of the sales by energy source is useful to indicate which types of models are more popular in the EU, and if the trend in the choice of energy is the same as presented in previous years. As highlighted in Figure 2-1, 59.6% of built-in hobs sold in 2007 were electric hobs, 37.6% were gas hobs and the remaining 2.8% were mixed.

According to GfK Retail and Technology GmbH market study, more than 8.7 Million built-in hobs were sold on the EU-27 in 2007.

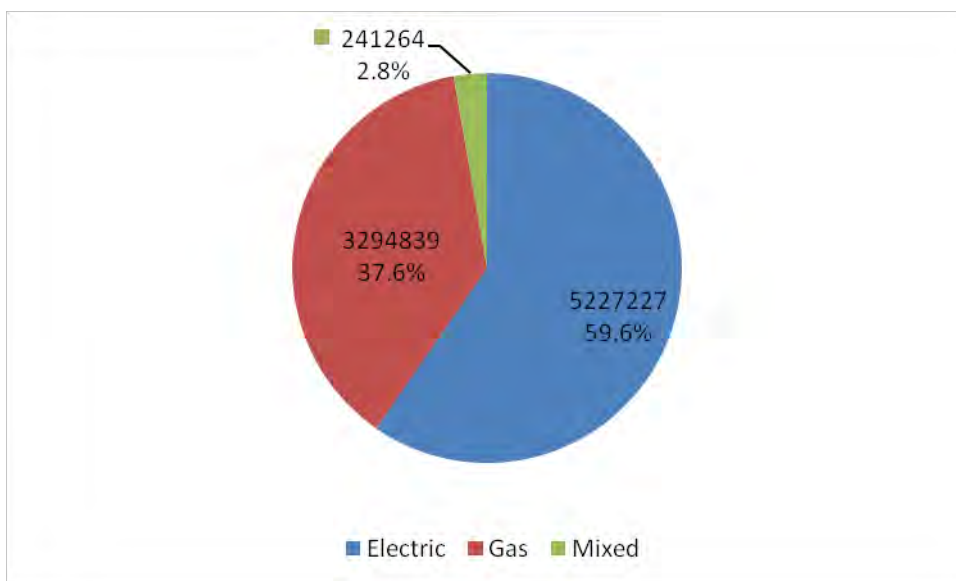


Figure 2-1: Estimated sales of domestic built-in hobs in EU-27 in 2007¹

➤ **Distribution per technology**

Among electric hobs, the preferred technology was radiant hobs (including halogen or not) with 70.8% of electric hobs sales. There were more than a million of built-in induction hobs sold in 2007, corresponding to 19.8% of the market. Solid plates hobs still represented 9.4% of total sales, as presented in Figure 2-2.

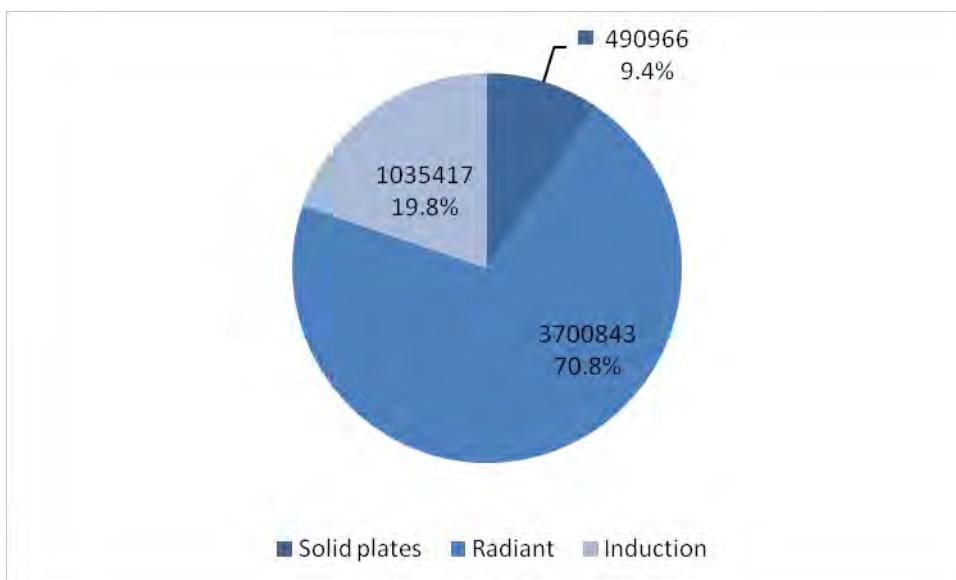


Figure 2-2: Estimated sales of domestic built-in electric hobs in EU-27 in 2007¹

Concerning gas hobs market, described in Figure 2-3, 84.9% of sales in 2007 were sealed hobs, and 14.8% were ceramic/glass ones.

¹ Source: GfK Retail and Technology GmbH. Member States not covered by the market panel: Cyprus, Denmark, Estonia, Latvia, Lithuania, Luxembourg, Malta

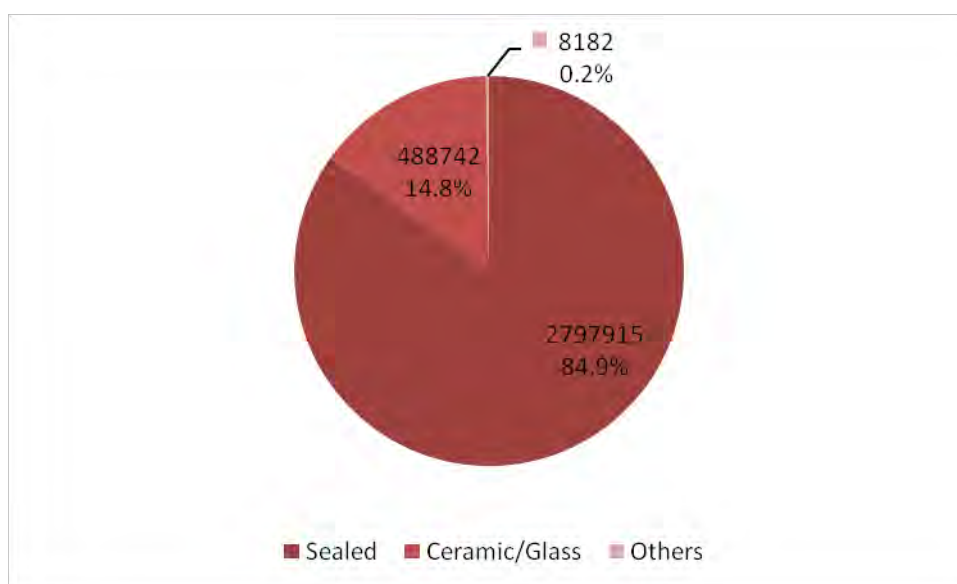


Figure 2-3: Estimated sales of domestic built-in gas hobs in EU-27 in 2007¹

An estimation of the mixed hobs repartition is presented in Figure 2-4. This estimation is based on the number of models manufactured by CECED members and available on the EU market in 2008. This information is thought to be representative of the sales distribution; however the real sales might be different. 78% of mixed hobs are composed of gas hobs combined with one of the electric hobs types (solid plates, radiant and induction with respectively 51%, 11% and 16%). 22% of mixed hobs are electrically powered, combining radiant and induction hobs.

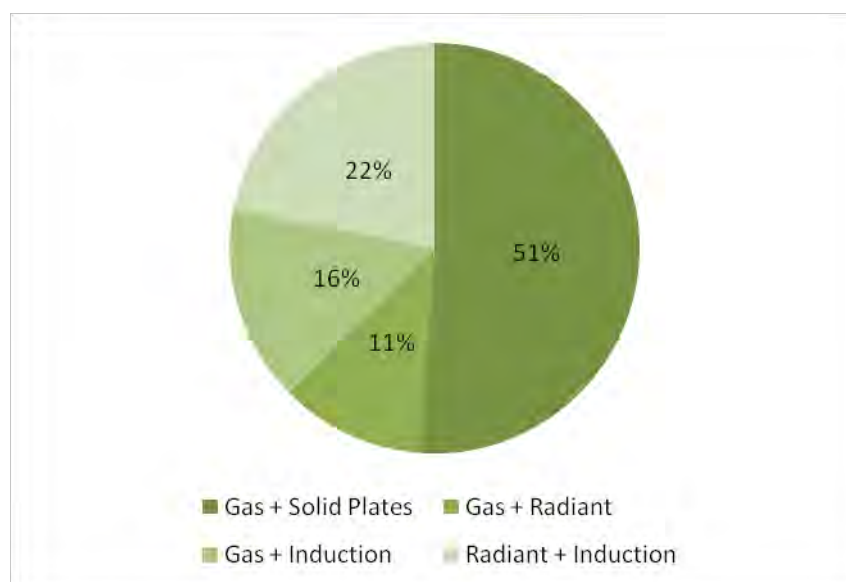
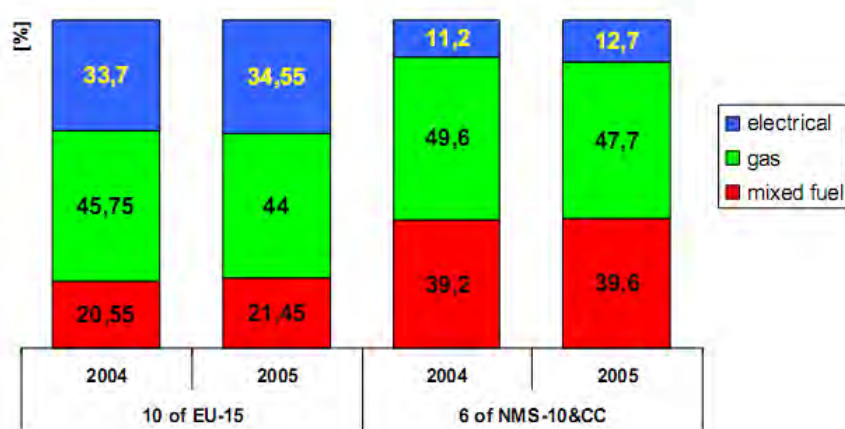


Figure 2-4: Mixed hobs models available on the EU market in 2008 (CECED Database)

➤ Data cross-validation with other sources of information

The Status Report on electricity consumption in the enlarged European Union² states that some equipment is concentrated in certain Member States, e.g. electric hobs have a high share in the German and French markets. The share in hobs sales between electric and gas models is 58.4% and 37.4% respectively across the EU-27, with almost 100% electric in Germany and Sweden, and almost 100 % gas in Italy according to the same report. A comparison of the sales of range cookers between 2004 and 2005 by type of fuel is presented in Figure 2-5; gas and mixed appliances claimed the major share of the market, being noticeably more popular in new Member States (and candidate countries).



- (1) 10 countries from EU-15: SE, UK, BE, NL, DE, AT, FR, IT, ES, PT
 (2) 6 countries from NMS-10 & CC: PL, CZ, HU, BG, RO, HR

Figure 2-5: Sales of range cookers by type of fuel in the EU²

Regarding electric built-in hobs, induction technology has grown markedly since 2002 with an average annual increase of about 24% as presented in Figure 2-6.

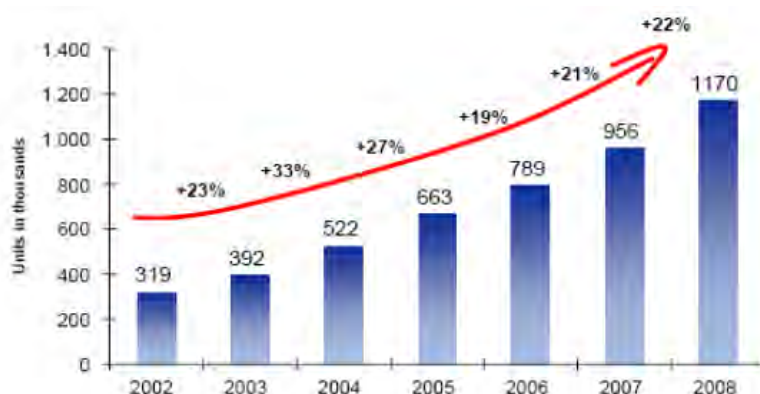


Figure 2-6: Evolution of the EU market for induction hobs³

² Bertoldi, P. and Atanasiu, B. (2006), "Electricity Consumption and Efficiency Trends in the Enlarged European Union". Status report.

For this figure, "mixed fuel" refers to the whole cooker. The hobs may be gas, electric or mixed hobs.

³ Source : Fagor

The European Committee of Domestic Equipment Manufacturers (CECED) provided information on the number of domestic hobs models manufactured by their members and available on the EU market in 2008. This was used to estimate the market share of sales for different categories. This data is gathered in the following tables by energy source, integration type, technology type and the number of cooking zones.

The estimation of domestic hobs market share in the EU as presented in Table 2-12 are very similar to those presented by Bertoldi in its 2006 report⁴ and to GfK Tetail and Technology GmbH estimations for 2007 presented in Figure 2-1. Electric model sales have the biggest share, of around 60% in both years, while gas models share is around 35%. The remaining corresponds to mixed fuel models.

Table 2-12: Estimation of domestic hobs market share according to energy source (2008, source: CECED)

Type of Appliance	Estimation of market share
Gas hobs	32%
Electric hobs	61%
Mixed Hobs	7%

The sales of hobs by integration type give information on the preference of built-in over free-standing equipment. As presented in Table 2-13, built-in hobs are the type of hobs most sold in the EU, mainly in the independent integration type. Hobs from range cookers have an important share of about 26% while portable tops sales correspond only to 1% of the total sales.

Table 2-13: Estimation of domestic hobs market share according to integration type⁵ (2008, source: CECED)

Type of Appliance	Estimation of market share
Independent hob (built-in)	66%
Dependent hob (built-in)	7%
Range Top (free-standing)	26%
Table top (portable)	1%

The sales of electric hobs according to technology type indicate that radiant hobs are the most popular model by far, followed by induction type and finally a small share by solid plates (see Table 2-14).

⁴ Bertoldi, P. and Atanasiu, B. (2006), "Electricity Consumption and Efficiency Trends in the Enlarged European Union". Status report.

⁵ Integration type refers to the mode of operation of the hob: whether is an independent built-on hob (it does not depend on any other equipment) or it works as part of a built in cook range (oven) and is dependant (integrated to) on it.

Table 2-14: Estimation of domestic electric hobs market share according to technology type (2008, source: CECED)

Type of Appliance	Estimation of market share
Solid plates	11%
Radiant Hobs	61%
Induction hobs	28%

Another important feature in hobs is the number of cooking zones. As presented in Table 2-15, most hobs sold have four cooking zones. The second most sold configuration is 5 cooking zone hobs with 13% market share; other configurations ranging from 1 to 6 cooking zones are less popular.

Table 2-15: Estimation of domestic hobs market share according to number of cooking zones (2008, source: CECED)

Type of Appliance	Estimation of market share of sales
1 cooking zone	2%
2 cooking zones	4%
3 cooking zones	6%
4 cooking zones	74%
5 cooking zones	13%
6 cooking zones	1%

Regarding grills, the sales of electric models is more important than that of gas models as presented in Table 2-16, with a similar share between electric radiant and electric contact grills.

Table 2-16: Estimation of domestic hobs market share (2008, source CECED)

Type of Appliance	Estimation of market share of sales
Gas grill	15%
Electric radiant grill	40%
Electric contact grill	45%

➤ **Forecast on the sales**

Forecasts have been assessed based on 2007 sales figures provided by GfK Retail and Technology. Discussed with CECED, the following assumptions were made to estimate the evolution of the sales until 2025, taking into account the variation of the growth rates for the periods 2007-2010, 2010-2015, 2015-2020 and 2020-2025:

- The global sales of domestic hobs will carry on growing until 2025. In 2025, the sales will be 4.5% higher than in 2007 (which is comparable to the expected increase of the number of households in EU).
- Sales of electric appliances (hobs and cookers) will increase while sales of gas and mixed appliances will decrease or remain constant.
- Within the electric appliances, the number of induction systems will significantly increase whereas solid plates will be less and less sold.

The resulting forecast for domestic hobs is presented in Table 2-17.

Similarly, the 2007 sales estimations for domestic grills were also discussed and agreed with CECED, so that the overall growth fits with the expected increase of the number of households at EU level (assuming a similar penetration market rate). Moreover, gas contact grills are available on the market but are thought to be negligible in regard of the sales of gas radiant grills.

The resulting forecast for domestic grills is presented in Table 2-18.

Table 2-17 : Forecast on domestic hobs' sales from 2007 to 2025

	Electric hobs						Gas hobs					
	Solid plates		Radiant		Induction		Sealed		Ceramic		others	
	Sales	growth	Sales	growth	Sales	growth	Sales	growth	Sales	growth	Sales	growth
2007	490 966		3 700 843		1 035 417		2 797 915		488 742		8 182	
2010	420 942	-5.0%	3 812 983	1.0%	1 304 328	8.0%	2 714 814	-1.0%	474 226	-1.0%	8 182	0.0%
2015	325 717	-5.0%	3 967 962	0.8%	1 829 387	7.0%	2 581 761	-1.0%	450 984	-1.0%	8 182	0.0%
2020	265 581	-4.0%	4 068 158	0.5%	2 334 813	5.0%	2 333 707	-2.0%	407 654	-2.0%	8 182	0.0%
2025	216 547	-4.0%	4 068 158	0.0%	2 773 025	3.5%	2 109 487	-2.0%	368 487	-2.0%	8 182	0.0%

	Mixed hobs								Cooker tops						TOTAL
	Sealed		Radiant		Induction		others		gas		electric		mix		
	Sales	growth	Sales	growth	Sales	growth	Sales	growth	Sales	growth	Sales	growth	Sales	growth	
2007	160 160		43 160		31 229		6 715		2 186 851		3 671 104		1 476 157		16 097 442
2010	160 160	0.0%	43 160	0.0%	31 229	0.0%	6 715	0.0%	2 109 065	-1.2%	3 726 446	0.5%	1 476 157	0.0%	16 288 407
2015	160 160	0.0%	43 160	0.0%	31 229	0.0%	6 715	0.0%	1 985 522	-1.2%	3 820 544	0.5%	1 476 157	0.0%	16 687 480
2020	152 311	-1.0%	41 045	-1.0%	31 229	0.0%	6 715	0.0%	1 869 216	-1.2%	3 917 017	0.5%	1 454 148	-0.3%	16 889 774
2025	144 846	-1.0%	39 033	-1.0%	31 229	0.0%	6 715	0.0%	1 759 723	-1.2%	3 976 126	0.3%	1 432 466	-0.3%	16 934 023

Table 2-18 : Forecast on domestic grills' sales from 2007 to 2025

	Electric Grills				Gas Grills		TOTAL
	radiant		contact		gas		
	Sales	growth	Sales	growth	Sales	growth	
2007	5 500 000		5 000 000		3 000 000		13 500 000
2010	5 549 649	0.3%	5 045 135	0.3%	3 027 081	0.3%	13 621 865
2015	5 633 394	0.3%	5 121 268	0.3%	3 072 761	0.3%	13 827 422
2020	5 689 954	0.2%	5 172 686	0.2%	3 103 611	0.2%	13 966 251
2025	5 747 082	0,2%	5 224 620	0,2%	3 134 772	0,2%	14 106 473

■ Member State level

This section presents the state of the markets of hobs and grills in several MS, according to data gathered by national agencies or national manufacturers associations.

➤ UK

The MTP Programme⁶ in the UK has created a database to access market information, estimated sales and stock of domestic electric, induction and gas hobs since 1980. The range of information available is wide, allowing an analysis taking as reference years 1990 (Kyoto reference), 2008 (recent data) and 2020 (forecasted). A summary of estimated sales for the period 1990 – 2020 is presented in Figure 2-7.

The range cookers market has declined by 27.3% in volume to 35.6 thousands units according to GfK figures for January to April 2009. This is mainly due to the decline of the housing market and the economic recession. In

Figure 2-7, the same trend is observed for hobs sales that have been falling down since the year 2000 for both gas and electric models.

Only induction hobs have increased their number of units sold per year since they entered recently into the market. Induction hobs sales started to be reported in 2003. Since then, sales have doubled reaching 20,000 units last year. This will still represent only 2% of the forecast market in 2020.

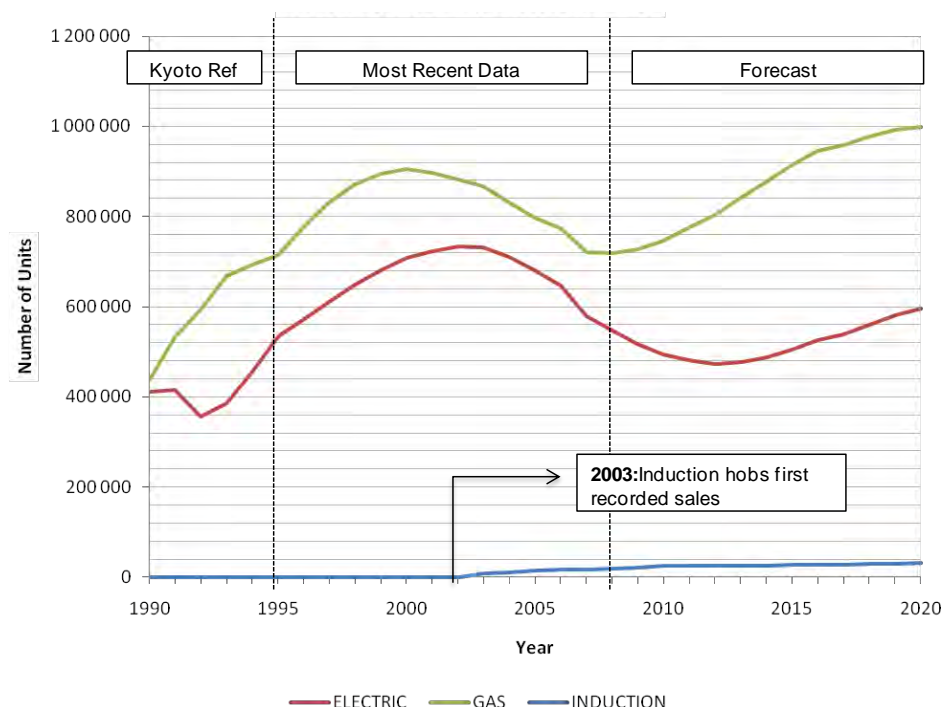


Figure 2-7: Estimated sales of hobs in the UK⁶

⁶ MTP, efficient-products.defra.gov.uk/cms/market-transformation-programme/

➤ FRANCE

The French Association of Appliance Manufacturers⁷ (GIFAM) provides up to date information on the sales and product segmentation for range cookers and built-in hobs in the French market. It is reported that the household ownership of built-in hobs in France in 2009 is 53% but there is no available information for range cookers. Even so, there is evidently a preference for gas appliances in general over electric ones as presented in Figure 2-8 for range cookers and in Figure 2-9 for built-in hobs. The share of gas range cookers in 2007 was 48%, while those for electric and combined units were 24.5% and 27.4% respectively. The share for gas built-in hobs was 42% with the remaining 58% split between induction, halogen and other types (including combined).

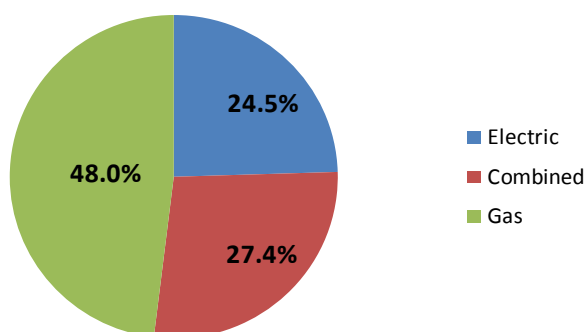


Figure 2-8: Range cookers market segmentation in France (2007)

According to the 2005 Guide of Built-in Cooking Equipment⁸ produced by GIFAM, 1.3 million hob units were sold in France during 2004. The product segmentation for this year is presented in Figure 2-9. French consumers are showing a much faster take up of the new induction technology compared with their UK counterparts.

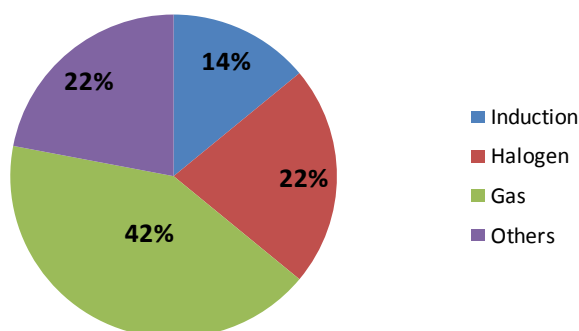


Figure 2-9: Built-in hobs market segmentation in France (2004)

⁷ GIFAM-Groupement Interprofessionnel des Fabricants d'Appareils d'Equipeement Ménager

⁸ GIFAM (2005). Le Guide 2005 de la cuisson encastrable.

The market for electric built-in hobs in 2007 is presented in Figure 2-10.

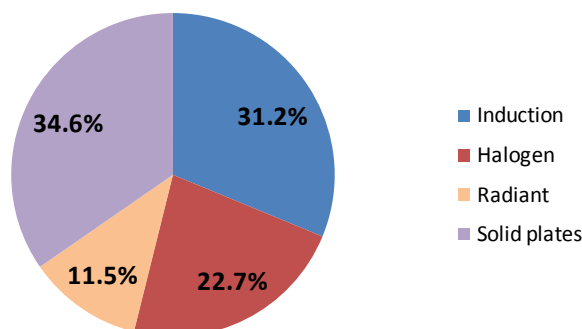


Figure 2-10: Electric built-in hobs market segmentation in France 2007

The evolution of sales for both appliances (range cookers and built-in hobs) can be seen in Table 2-19. It appears that there is a slight decrease in the sales of range cookers and an increase in the sales of built-in hobs that could be attributed to a new preference for built-in appliances.

Table 2-19: Evolution of sales of range cookers and built-in hobs in France (thousands of units)

TYPE OF APPLIANCE	2001	2002	2003	2004	2005	2006	2007	2008
Range cookers	890	825	810	780	757	757	740	730
Built-in Hobs	1,200	1,200	1,220	1,280	1,305	1,384	1,410	1,440

➤ SPAIN

The Spanish Association of Appliance Manufacturers⁹ (ANFEL) provided data on sales of white goods that included two types of products within the categories in Lot 23, range cookers and hobs. Table 2-20 contains the evolution of the Spanish market for these appliances. There is no further information on type of fuel or product segmentation that enables to establish a preference for either gas or electrical appliances. Besides a decrease in the number of units sold for both categories every year since 2005, the figures do not provide enough information to conclude further.

Table 2-20: Evolution of Sales in Spain (thousands of units)⁹

TYPE OF APPLIANCE	2005	2006	2007	2008
Range cookers	162.4	146.4	124.3	103.0
Hobs	1,462.1	1,471.8	1,437.0	1,187.0

⁹ www.anfel.org/05.cfm?anual=1

➤ THE NETHERLANDS

The Association of Appliance Manufacturers in the Netherlands (VLEHAN) publishes a report every year with market information on sales¹⁰. Data was retrieved since 2003 for total sales of hobs (in units and in €) and is presented in Table 2-21. In addition, the market segmentation for built-in hobs is provided in Figure 2-11. There is a marked preference for gas hobs (66%) over electric ones and information from previous years indicates that this has been consistently the case over time.

Table 2-21: Evolution of Sales in the Netherlands¹⁰

TOTAL SALES	2003	2004	2005	2006	2007	2008
Thousands of units	226	227	239	225	260	253
Millions of Euros	129.6	118.0	129.9	130.0	135.0	131.0

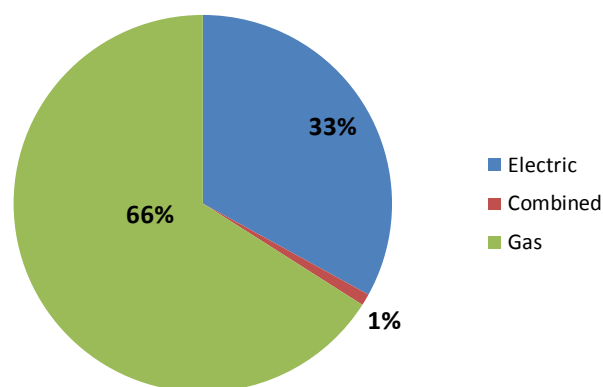


Figure 2-11: Built-in hobs market segmentation in the Netherlands 2008¹⁰

➤ DENMARK

The Danish Technological Institute provided data about the sales of hobs in Denmark in 2007 and 2008, as presented in the table below:

Table 2-22: Hobs sales in Denmark in 2007 and 2008

	2007 sales (Number of units)	2008 sales (Number of units)
Electric hobs	192,000	167,000
Gas hobs	18,000	10,000

¹⁰ www.vlehan.nl/www/?page=actueel_jaarverslagen

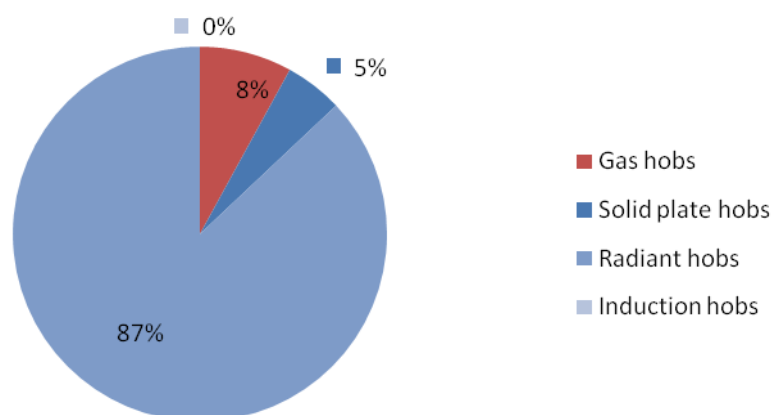


Figure 2-12: Free-standing hobs market segmentation in Denmark in 2008

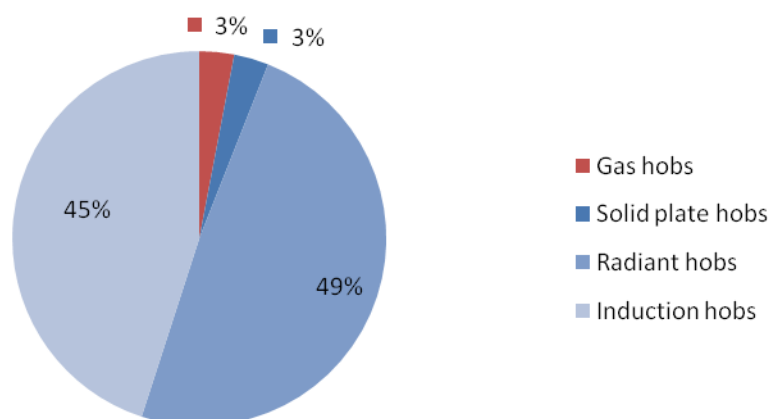


Figure 2-13: Built-in hobs market segmentation in Denmark in 2008

Looking at sales figures for 2007 and 2008, electric hobs seems to be much more popular than gas hobs in Denmark. It must be noted that the market is moving away from solid plates in favour to radiant hobs. Induction hobs represented 45% of the Danish built in sales in 2008, which is high compared to other European countries.

2.2.1.2 STOCK DATA

■ Estimation of the initial stock at EU Level

No published figures are available concerning the overall stock of domestic hobs and grills at the EU level. A first approach to estimate this stock is to multiply the annual sales by the average lifetime of the appliances, which was estimated at 19 years for these types of appliance, except for induction hobs (with a 15 year-lifetime) as it is further explained in Task 3. However, with this approach, the sales would be considered to have been constant for the past 19 years, which is unrealistic. Therefore, modifications on these results have been made according to the following assumptions (see Table 2-23):

- The number of households in the EU-27 being around 205 millions in 2008¹¹, an overall stock of 305 million appliances (directly calculated as sales figure × lifetime) would mean that around 50% of EU households have more than one hob. Therefore, the overall stock has been reduced to 258 million units. This also reflects the fact that overall sales have increased in the last 19 years.
- The sales of electric appliances were considered to have strongly increased for the past 19 years, thus the stock of electric hobs was considered to be lower than the results obtained with the lifetime approach.

Table 2-23: Estimate of the hobs' EU stock in 2007

	Electric hobs			Gas hobs			Mixed hobs			
(mln of units)	solid plates	radiant	induction	Sealed	Ceramic	others	Sealed	radiant	induction	others
Sales x Lifetime	9.4	70	15.5	53	9	0.15	3	0.8	0.6	0.13
Calibrated Stock	12	55	4.5	53	9	0.15	3	0.8	0.3	0.08

- Besides, for cooker tops, data have been assessed in the Ecodesign Lot 22 preparatory study on ovens, resulting in 50 millions of gas ranges, 50 millions of electric ranges and 20 millions of mixed ranges at EU level.

■ Forecasts on the stock

The forecasts should reflect the trends already presented at sales level. The overall penetration rate of domestic cooking appliances will remain constant until 2025 and the stock should increase in a comparable manner to the number of households in the EU.

The resulting forecasts are presented in Table 2-24 and Figure 2-14 for domestic hobs and in Table 2-25 and Figure 2-15 for domestic grills.

¹¹ Population statistics (Eurostats). Average size of households in the EU-27 (INSEE).

Table 2-24 : Forecast on domestic hobs' stock from 2007 to 2025

	Electric hobs						Gas hobs					
	Electric - solid plates		Electric - radiant		Electric - induction		Gas - sealed		Gas - ceramic		Gas - others	
	Stock unit	growth	Stock unit	growth	Stock unit	growth	Stock unit	growth	Stock unit	growth	Stock unit	growth
2007	12 000 000		55 000 000		4 500 000		53 000 000		9 000 000		150 000	
2010	10 952 076	-3.0%	56 666 555	1.0%	6 322 176	12.0%	51 425 847	-1.0%	8 865 674	-0.5%	150 000	0.0%
2015	9 404 920	-3.0%	58 969 775	0.8%	11 141 834	12.0%	48 905 469	-1.0%	8 431 168	-1.0%	150 000	0.0%
2020	8 720 397	-1.5%	60 458 836	0.5%	17 944 036	10.0%	46 508 614	-1.0%	8 017 957	-1.0%	150 000	0.0%
2025	8 085 696	-1.5%	60 458 836	0.0%	26 365 675	8.0%	44 229 229	-1.0%	7 624 997	-1.0%	150 000	0.0%

	Mixed hobs								Cooker Tops						TOTAL
	Sealed		radiant		induction		others		gas		electric		mix		
	Stock unit	growth	Stock unit	growth	Stock unit	growth	Stock unit	growth	Stock unit	growth	Stock unit	growth	Stock unit	growth	
2007	3 000 000		820 000		300 000		80 000		50 000 000		50 000 000		20 000 000		257 850 000
2010	3 000 000	0.0%	820 000	0.0%	300 000	0.0%	80 000	0.0%	49 253 744	-0.5%	50 753 756	0.5%	20 301 503	0.5%	258 891 330
2015	3 000 000	0.0%	820 000	0.0%	300 000	0.0%	80 000	0.0%	48 034 652	-0.5%	52 035 352	0.5%	21 337 083	1.0%	262 610 254
2020	2 925 746	-0.5%	799 704	-0.5%	300 000	0.0%	80 000	0.0%	45 680 476	-1.0%	53 349 310	0.5%	20 808 964	-0.5%	265 744 040
2025	2 853 330	-0.5%	779 910	-0.5%	300 000	0.0%	80 000	0.0%	43 441 678	-1.0%	54 154 366	0.3%	20 808 964	0.0%	269 332 682

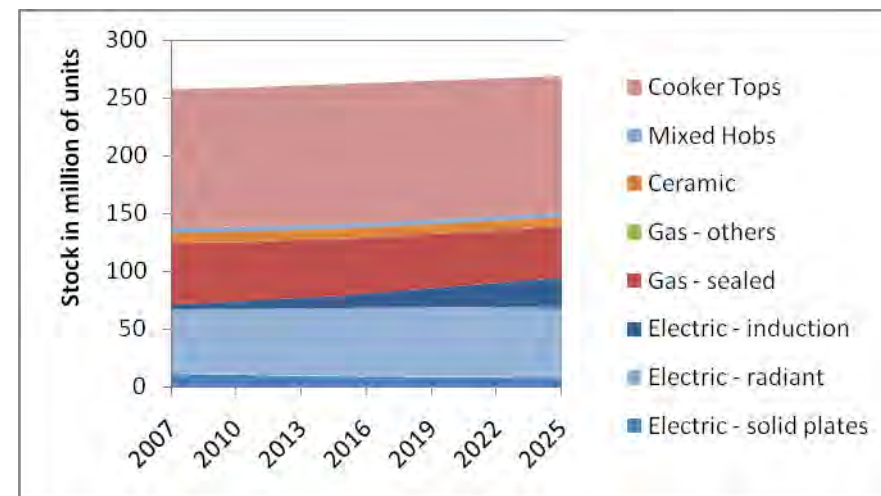
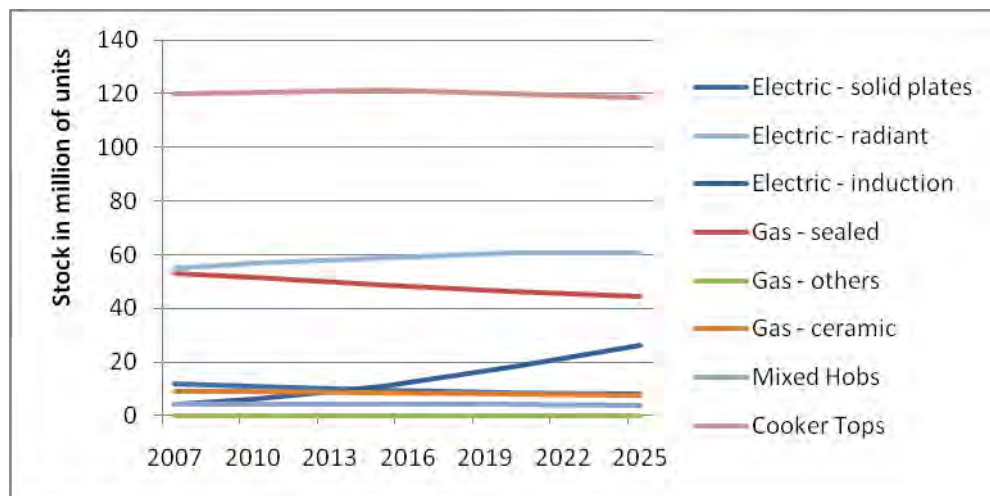


Figure 2-14: Forecast on the stock of domestic hobs from 2007 to 2025

Table 2-25: Forecast on domestic grills' stock from 2007 to 2025

	Electric Grills				Gas Grills		TOTAL
	radiant		contact		gas		
	Stock unit	growth	Stock unit	growth	Stock unit	growth	
2007	104 500 000		95 000 000		57 000 000		256 500 000
2010	105 443 324	0.3%	95 857 568	0.3%	57 514 541	0.3%	258 815 432
2015	107 034 493	0.3%	97 304 084	0.3%	58 382 451	0.3%	262 721 027
2020	108 109 127	0.2%	98 281 025	0.2%	58 968 615	0.2%	265 358 767
2025	109 194 552	0.2%	99 267 774	0.2%	59 560 665	0.2%	268 022 991

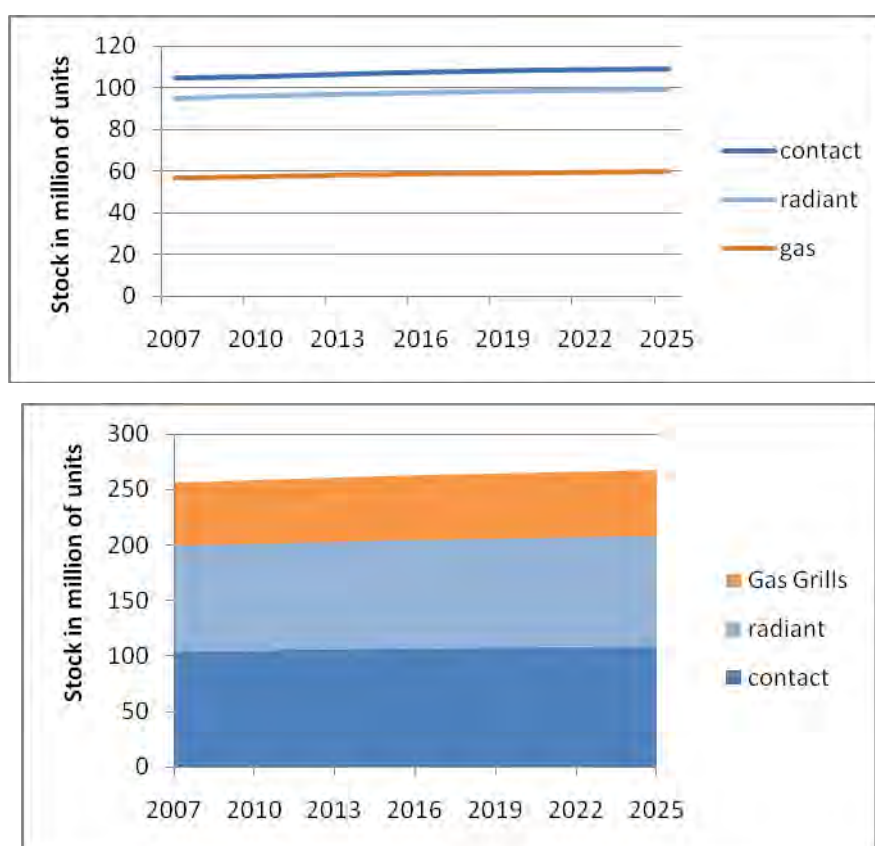


Figure 2-15: Forecast on the stock of domestic grills from 2007 to 2025

■ Member State level

Several markets can be looked at in order to gain a picture of the stock of hobs and grills in the EU.

UK

The MTP Programme¹² database provides market information, estimated sales and stock of domestic electric, induction and gas hobs since 1980. The summary for estimated stock for the period 1990 – 2020 is presented in Figure 2-16.

According to the Policy Brief¹³ prepared by DEFRA, a range of different technologies and hob types are available to the consumer in the UK, who has traditionally preferred gas. This is supported by the stock data presented in Figure 2-16 below where the number of gas appliances was on average 17% more than that of electrical ones in recent years (detailed data are presented in Annex).

The first stock of induction hobs started to be reported in 2003. Between 2003 and 2008, sales have doubled and the stock increased to 86,000 units in 2008. For electric and gas hobs that have been in the market for a longer period, the stock reaches nearly 12 million units for the first and 14.3 million units for the second.

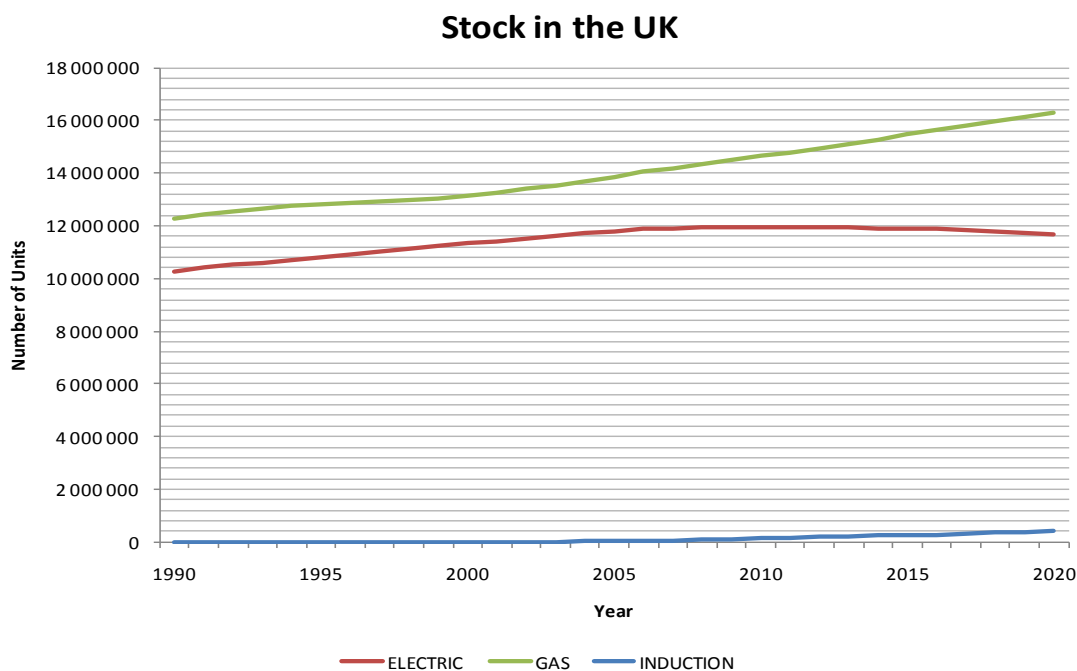


Figure 2-16: Domestic Hobs' Stock in the UK¹⁴

From the previous figure, the number of gas hobs (units) in households in the UK will continue to grow 1% annually reaching more than 16 million in the year 2020. For electric hobs, the units sold are expected to decrease significantly for the next couple of years, thus the stock will stabilize with time reaching a number of units of around 11.5 million. Induction hobs started to penetrate the market very fast reaching rates of growth of more than 50% from one year to the next after 2003; currently the rate is slowly decreasing (30% last year) and it is expected to fall to 10% in 2020. In general, it

¹² [MTP, efficient-products.defra.gov.uk/cms/market-transformation-programme/](http://MTP. efficient-products.defra.gov.uk/cms/market-transformation-programme/)

¹³ UK Department for Environment, Food and Rural Affairs (DEFRA) (2008), "Policy Brief: Improving the energy performance of domestic cooking products".

¹⁴ MTP, efficient-products.defra.gov.uk/cms/market-transformation-programme/

seems that induction hobs are replacing the share of electric hobs, whereas the stock of gas hobs continues to grow with time.

The UK Energy Saving Trust report¹⁵ stated that gas hobs are preferred by consumers in UK whereas in EU States where no gas is available, electric hotplates dominate. In 2002, 54% of UK households owned gas hobs and this is expected to rise to 57% by 2020.

➤ DENMARK

The Danish Technological Institute provided some data about the Danish hobs market, presented in the table below.

Table 2-26: Estimated stocks of hobs in Denmark (2008)

	Number of units
Electric hobs	2,303,000
Gas hobs	281,000

2.2.2. COMMERCIAL APPLIANCES

2.2.2.1 STOCK DATA

Information about the stock of commercial appliances used in restaurants and covered by the DG ENER Lot 23 study is scarce. The commercial cooking equipment market can be assumed to be linked to the restaurant industry. Therefore, this market is presented in the following section. Then, an estimation of the commercial hobs and grills used in restaurants, made together with the main manufacturers, is presented.

■ Restaurant industry

The restaurant sector can be divided into two categories, which have specific needs, do not buy the same equipments and do not use them the same way:

- The profit sector or commercial sector: institutions which have to cook dishes in a short time (restaurants, quick service, pubs, hotels and lodging and leisure)
- The cost sector, non-commercial sector or institutional sector: institutions which cook big amount of food and serve it at scheduled time (staff catering, health care, education and services).

The European Modern Restaurants Association (EMRA) provides data about the number of meals eaten in the EU in 2005, which is presented in Table 2-27.

¹⁵ Energy Saving Trust (2006); "The Rise of the Machines", available at: www.energysavingtrust.org.uk/uploads/documents/aboutest/Riseofthemachines.pdf

Table 2-27: Number of meals eaten in the EU in 2005¹⁶

	Million of meals	Percentage
Total meals eaten in EU in 2005	498,605	
At home	441,764	88.6%
Out of home	56,841	11.4%
<i>In commercial restaurants</i>	<i>35,900</i>	<i>7.2%</i>
<i>In institutional restaurants</i>	<i>20,941</i>	<i>4.2%</i>

The stock of commercial cooking appliances is likely to follow the same trend as the number of foodservice outlets. Eurostat provides statistics about the number of hotels and restaurants (NACE code H55) in the Member States, presented in Table 2-28.

Table 2-28: Number of hotels, restaurants, bars, canteens and catering in the EU between 2004 and 2007¹⁷

Member State	2004	2005	2006	2007	Evolution 2004-2007
Austria	52,565	53,036	54,221	54,318	3.33%
Belgium	:	:	:	44,985	:
Bulgaria	:	:	22,771	22,194	:
Cyprus	:	7,364	6,818	6,957	:
Czech Republic	52,040	51,688	51,354	50,286	-3.37%
Denmark	14,145	14,627	14,894	15,322	8.32%
Estonia	1,765	1,885	2,011	2,071	17.34%
Finland	13,635	13,860	14,074	14,372	5.41%
France	253,443	255,198	256,311	251,484	-0.77%
Germany	:	:	:	:	:
Greece	100,838	102,215	109,015	111,786	10.86%
Hungary	34,997	32,997	31,964	33,698	-3.71%
Ireland	16,625	17,164	:	13,332	-19.81%
Italy	277,424	281,639	293,529	291,367	5.03%
Latvia	4,448	4,879	4,842	4,609	3.62%
Lithuania	3,225	3,879	4,315	4,562	41.46%
Luxembourg	:	:	2,927	2,906	:
Malta	:	:	:	:	:
Netherlands	39,725	40,215	40,200	39,705	-0.05%

¹⁶ EMRA (European Modern Restaurants Association). *General Brochure*. Retrieved November 2010, from: www.studiocohen.com/emradef/documents/EMRABrochure.pdf

¹⁷ Eurostat, 2007, *Food-act 12: Regional distribution of hotels and restaurants*. Retrieved November 2010 from: http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=food_act12&lang=en

Member State	2004	2005	2006	2007	Evolution 2004-2007
Poland	58,594	59,171	58,345	59,496	1.54%
Portugal	68,618	95,744	92,593	94,956	38.38%
Romania	17,444	19,509	20,899	22,382	28.31%
Slovakia	1,260	1,720	1,981	2,200	74.60%
Slovenia	7,313	7,278	:	7,667	4.84%
Spain	301,890	306,166	311,097	308,878	2.31%
Sweden	:	26,099	26,702	27,617	:
United Kingdom	165,411	168,052	168,338	170,109	2.84%
Weighted growth rate for MS where data is available both in 2004 and 2007					+4.52%

At the EU level, the number of foodservice outlets is growing between 2004 and 2007, with an increase in 16 Member States. There was no data available for Belgium, Germany and Malta.

This sector suffered from the 2008 economic crisis, and statistics more recent than 2007 are not yet available. This trend might not be representative for the current situation. However, this crisis can be considered as an exceptional phenomenon, therefore the number of outlets could carry on increasing until 2025.

Thanks to stakeholders, complementary information about the commercial sector was gathered at Member State level for the United Kingdom and Germany.

➤ UK

An initial approach to the installed base or the stock units for this sector consists in investigating the number of kitchens (foodservice outlets). CESA¹⁸ provides information on the size and the structure of the sector for the year 2006 in the UK, as presented in Table 2-29. Although there is no information on the different appliances used in each kitchen, the number of places where food is prepared suggests that there is at least one set of hobs in each of them. It is probable that there is even more than one appliance type per kitchen but no information is available to support this assumption. The estimated number of prepared meals in the same year was 8.7 billion which gives an idea of the operational use: on average more than 90 meals are prepared each day per kitchen in the commercial sector (if the number of meals is split by the number of foodservice outlets).

¹⁸ CESA Catering Equipment Suppliers' Association (2007). "The UK Market for Foodservice Equipment".

Table 2-29: Structure of the commercial sector in the UK (2007)²⁰

Number of foodservice outlets in 2006		
Restaurants	26,629	10%
QSR (Quick Service)	29,784	11%
Pubs	50,989	19%
Hotels	46,562	18%
Leisure	19,234	7%
Staff Catering	20,436	8%
Health Care	31,577	12%
Education	34,608	13%
Services	3,068	1%
TOTAL	262,888	100%

➤ **GERMANY**

In Germany, the number for commercial establishments in the year 2007 was of 240,000, consisting of mainly hotels, guesthouses, hostels, restaurants, cafés, ice cream parlors, snack bars/take aways, discotheques, bars/pubs, cafeteria/canteen and caterers. According to the German Association of Catering Equipment Manufacturers (HKI), electric equipment is more common than gas equipment in Germany, where the ratio of gas/electric is on average 0.33. The number of installed products in three main categories and their share per energy type are presented in Table 2-30.

Table 2-30: Stock of commercial equipment in Germany (2007)¹⁹

Type of appliance	Total	Ratio Gas/Electric	Gas	Electric
Commercial stoves	6,000	0.33	1,489	4,511
Multipurpose cooking pans	3,000	0.33	744	2,256
Roast, grill and griddle plates equipment	3,000	0.075	209	2,791

■ **Estimation of the current stock of commercial hobs and grills used in restaurants**

A market survey at manufacturer level was performed in order to have a preliminary overview of the market distribution. Based on the feedbacks of four main EU manufacturers on their sale shares according to their product catalogues, this overview (see Figure 2-17) is only indicative as there is some uncertainty on the aggregated

¹⁹ Figures provided by HKI in internal communications.

shares of the different manufacturers but some common trends have been observed: gas boiling tops, electric boiling tables and gas and electric fry tops are the most sold products (in total 67.6% of the lot 23 cooking appliances).

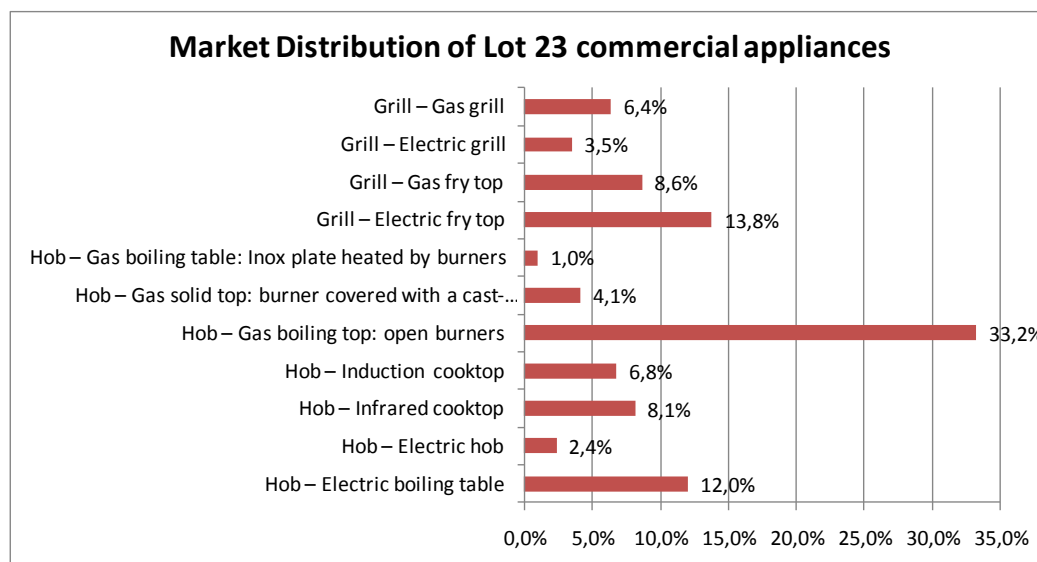


Figure 2-17 : Market distribution of Lot 23 commercial appliances at EU level.

Moreover, a stoichiometric approach is established in order to assess the stock of commercial hobs and grills at EU level. Indeed, based on some manufacturers' feedbacks and market data, it is considered that for 1 commercial oven in use, there is the equivalent of 0.68 commercial hob and 0.32 commercial grill in stock at EU level (in line with figures presented in Figure 2-17)

Based on the outcomes of DG ENER Lot 22 Ecodesign preparatory study, the stock figures for commercial hobs and grills in 2007 are estimated as follows:

Table 2-31 : Stock figures for commercial hobs and grills

	Commercial hobs	Commercial grills
Stock in 2007	330,000	150,000

A further differentiation on energy source can be performed based on the stakeholders' feedbacks. Table 2-32 shows that the energy distributions at EU level differ significantly from the German case as higher shares for gas commercial appliances are observed.

Table 2-32: Stock figures for commercial hobs and grills, depending on energy source

2007 Stock figures		Gas	Electric
Commercial Hobs	%	60	40
	units	200,000	130,000
Commercial Grills	%	50	50
	units	75,000	75,000

■ **Forecasts for the stock of commercial hobs and grills**

Regarding commercial hobs and grills, market trends were discussed with some manufacturers, which indicated:

- A stable market for gas hobs and grills;
- Decreasing sales for electric hobs, mainly explained by the parallel increase of the sales for combi-steamers;
- Increasing sales for electric fry tops/grills.

The resulting forecasts are presented in Table 2-33 and Figure 2-18

Table 2-33: Forecasts for the stock of commercial hobs and grills at EU level

	Electric Hobs		Gas Hobs		Electric Fry Tops / Grills		Gas Fry Tops / Grills		TOTAL
	Stock unit	Growth	Stock unit	Growth	Stock unit	Growth	Stock unit	Growth	Stock
2007	130 000		200 000		75 000		75 000		480 000
2010	126 139	-1.0%	200 000	0.0%	79 591	2.0%	75 000	0,0%	480 729
2015	121 785	-0.7%	195 050	-0.5%	85 742	1.5%	76 894	0,5%	479 471
2020	117 582	-0.7%	190 222	-0.5%	90 115	1.0%	76 894	0,0%	474 813
2025	114 672	-0.5%	190 222	0.0%	94 712	1.0%	76 894	0,0%	476 500

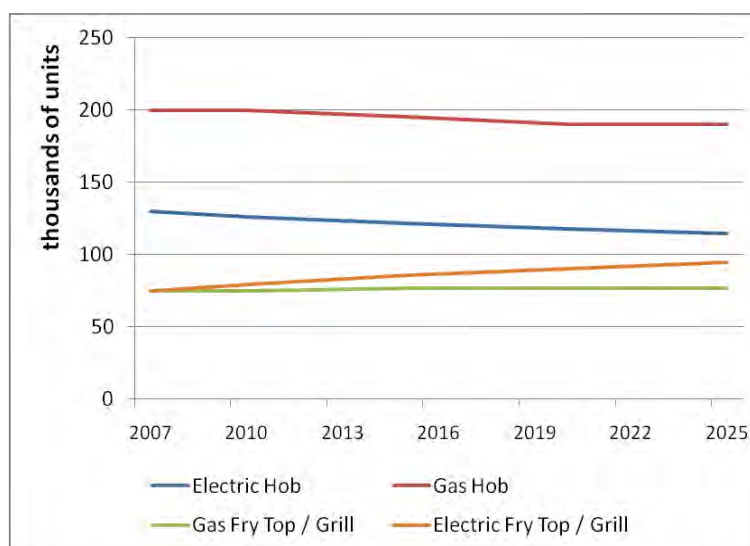


Figure 2-18: Forecasts for the stock of commercial hobs and grills

2.2.2.2 SALES DATA

■ EU Level

2007 sales figures at EU level are calculated from the stock figures considering a product lifetime of 12 years for commercial hobs and 10 years for commercial grills (these data are further explained in Task 3).

Sales forecasts are then estimated in consistency with the stock forecasts and the market trends that were previously presented. The results are shown in Table 2-34.

Table 2-34: Forecasts for the sales of commercial hobs and grills

	Electric Hobs		Gas Hobs		Electric Fry Tops/Grills		Gas Fry Tops/Grills		TOTAL
	Sales unit	Growth	Sales unit	Growth	Sales unit	Growth	Sales unit	Growth	Sales
2007	10 833		16 667		7 500		7 500		42 500
2010	10 512	-1.0%	16 667	0.0%	7 959	2.0%	7 500	0.0%	42 637
2015	10 149	-0.7%	16 254	-0.5%	8 574	1.5%	7 689	0.5%	42 666
2020	9 799	-0.7%	15 852	-0.5%	9 012	1.0%	7 689	0.0%	42 351
2025	9 556	-0.5%	15 852	0.0%	9 471	1.0%	7 689	0.0%	42 568

■ Complementary information at Member State Level

➤ UK

The report from the UK Catering Equipment Suppliers' Association (CESA)²⁰ in 2007 provides some information on the industry in this Member State, where cooking appliances sales were of £ 184 million (around 276 million Euros) in 2006 representing 195,000 units sold. Information on the related distribution of the types of sold

²⁰ CESA Catering Equipment Suppliers' Association (2007). The UK Market for Foodservice Equipment.

appliances is not available; this figure surely includes appliances outside the scope of this study but provides information on the size of the market in the UK.

➤ Germany

The German catering equipment manufacturers association (HKI) suggested a quantitative overview of the production of some commercial appliances for the European single market in Germany for the years 2007 and 2008, which is presented in Table 2-35. Those figures are based on extrapolations and estimations and should be considered with strong caution.

Table 2-35: Production of commercial appliances for the European single market in Germany for 2007 and 2008

Type of commercial appliance	Estimation of the production for 2007	Estimation of the production for 2008
Gas hobs	Much less than 3,500	Much less than 3,500 and more than in 2007
Induction hobs	Much less than 4,000	Much less than 4,000 and more than in 2007
Radiant hobs	Much less than 3,500	Much less than 3,500 and more than in 2007
Electric cast-iron hobs	Much less than 500	Much less than 500 and more than in 2007
Big hobs electricity operated	Much less than 2,500	Much less than 2,500 and more than in 2008
Griddles electricity operated	Much less than 400	Similar to 2007
Infra grill electricity operated	Much less than 200	Similar to 2007

2.2.3. SUMMARY OF MARKET DATA

Table 2-36: Domestic hobs' sales in the EU-27 in 2007 and forecasts

Type of Appliance	2007	2010	2015	2020	2025
Built in gas hobs	3,294,839	3,197,222	3,040,927	2,749,543	2,486,155
Built in electric hobs - Solid plates	490,966	420,942	325,717	265,581	216,547
Built in electric hobs - Radiant	3,700,843	3,812,983	3,967,962	4,068,158	4,068,158
Built in electric hobs - Induction	1,035,417	1,304,328	1,829,387	2,334,813	2,706,688
Built in mix hobs	241,264	241,264	241,264	231,299	221,823
Gas cooker tops	2,186,851	2,109,065	1,985,522	1,869,216	1,759,723
Electric cooker tops	3,671,104	3,726,446	3,820,544	3,917,017	3,976,126
Cooker tops from mixed fuel cookers	1,476,157	1,476,157	1,476,157	1,454,148	1,432,466

Table 2-37: Domestic grills' sales in the EU-27 in 2007 and forecasts

Type of Appliance	2007	2010	2015	2020	2025
Gas grills (radiant)	3,000,000	3,027,081	3,072,761	3,103,611	3,134,772
Electric radiant grills	5,500,000	5,549,649	5,633,394	5,689,954	5,747,082
Electric contact grills	5,000,000	5,045,135	5,121,268	5,172,686	5,224,620

Table 2-38: Commercial sales in the EU-27 in 2007 and forecasts

Type of Appliance	2007	2010	2015	2020	2025
Electric hobs	10,833	10,512	10,149	9,799	9,556
Gas hobs	16,667	16,667	16,254	15,852	15,852
Electric grills	7,500	7,959	8,574	9,012	9,471
Gas grills	7,500	7,500	7,689	7,689	7,689

Table 2-39: Domestic hobs' stocks in the EU-27 in 2007 and forecasts

Type of Appliance	2007	2010	2015	2020	2025
Gas hobs	62,150,000	60,441,521	57,486,636	54,676,571	52,004,226
Electric hobs - Solid plates	12,000,000	10,952,076	9,404,920	8,720,397	8,085,696
Electric hobs - Radiant	55,000,000	56,666,555	58,969,775	60,458,836	60,458,836
Electric hobs - Induction	4,500,000	6,322,176	11,141,834	17,944,036	26,365,675
Mix hobs	4,200,000	4,200,000	4200000	4105450	4,013,241
Gas cooker tops	50,000,000	49,253,744	48,034,652	45,680,476	43,441,678

Type of Appliance	2007	2010	2015	2020	2025
Electric cooker tops	50,000,000	50,753,756	52,035,352	53,349,310	54,154,366
Cooker tops from mixed fuel cookers	20,000,000	20,301,503	21,337,083	20,808,964	20,808,964

Table 2-40: Domestic grills' stocks in the EU-27 in 2007 and forecasts

Type of Appliance	2007	2010	2015	2020	2025
Gas grills (radiant)	57,000,000	57,514,541	58,382,451	58,968,615	59,560,665
Electric radiant grills	104,500,000	105,443,324	107,034,493	108,109,127	109,194,552
Electric contact grills	95,000,000	95,857,568	97,304,084	98,281,025	99,267,774

Table 2-41: Commercial stocks in the EU-27 in 2007 and forecasts

Type of Appliance	2007	2010	2015	2020	2025
Electric hobs	130,000	126,139	121,785	117,582	114,672
Gas hobs	200,000	200,000	195,050	190,222	190,222
Electric grills	75,000	79,591	85,742	90,115	94,712
Gas grills	75,000	75,000	76,894	76,894	76,894

2.3. MARKET TRENDS

In this subtask different market structures are identified and an insight from historic and ongoing market trends for both sales/stock and product design is provided. This information will be useful while identifying potential base-cases (Task 5) and for evaluating their improvement potential (Task 7). It is important to understand such trends so as to identify the products which are going to be obsolete in the near future. Exclusion of such products in the early phase of the study will allow to focus on the products which are (and are going to remain) representative of the current and future market. This sub-task also identifies economic life-cycles of different products.

2.3.1. DOMESTIC APPLIANCES MARKET STRUCTURE

CECED represents the European manufacturers of domestic appliances. According to the Report on Energy Consumption of Domestic Appliances in European Households²¹, direct EU employment in this sector is 200,000 staff and indirect employment represented in the supply industry and retailers/distribution is close to half a million.

²¹ CECED. Report on Energy Consumption of Domestic Appliances in European Households, 2001, [www.ceced.org/IFEDE/easnet.dll/GetDoc?APPL=1&DAT_IM=20429B&DOWNLD=Stock_Model_Report\[1\].pdf](http://www.ceced.org/IFEDE/easnet.dll/GetDoc?APPL=1&DAT_IM=20429B&DOWNLD=Stock_Model_Report[1].pdf).

Manufacturers' share of the European market of white goods in 2005 is shown in Figure 2-19. The values presented are based on unit sales for built-in ovens, range cookers, dishwashers, dryers, freezers, hobs, refrigerators and washing machines across the Czech Republic, France, Germany, Hungary, Poland, Italy, Russia, Spain, Sweden Turkey and UK.

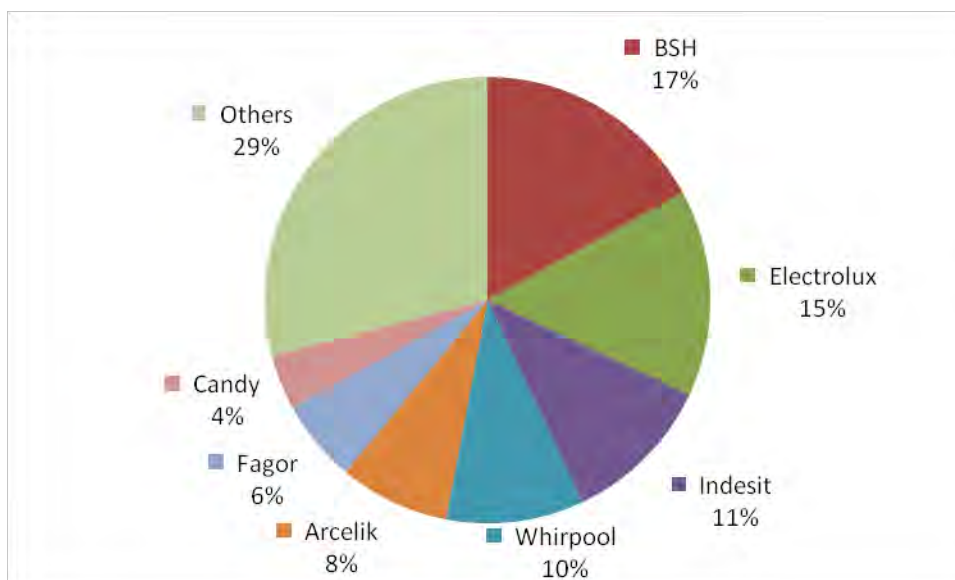


Figure 2-19: Share of the European market for white goods in 2005 by manufacturer²²

It is noticeable that about 53% of the market (of white goods, not only of domestic hobs and grills) is concentrated around four main manufacturers:

- Electrolux – Sweden
- Whirlpool – USA
- BSH – Germany
- Indesit – Italy

The main manufacturers group in the sector are represented in the CECED as members (see Table 2-42 for a complete list with the country of their headquarters in the EU), as well as national associations from 23 Member States.

Table 2-42: List of Domestic Equipment Manufacturers in the EU

MANUFACTURER	COUNTRY
GROUPE SEB	France
AB ELECTROLUX	Sweden
ARCELIK	Turkey

²² European Commission – DG ENER, Ecodesign preparatory studies Lots 13 & 14 (2007), "A portrait of the household appliance industry and market in Europe"

MANUFACTURER	COUNTRY
ARISTON THERMO Group	Italy
BSH BOSCH UND SIEMENS HAUSGERÄTE GmbH	Germany
CANDY ELETTRODOMESTICI Srl	Italy
DE LONGHI SpA	Italy
FAGOR Group	Spain
GORENJE d.d.	Slovenia
INDESIT COMPANY SpA	Italy
MIELE & Cie. GmbH & Co.	Germany
PHILIPS D.A.P.	The Netherlands
SAECO	Italy
WHIRLPOOL EUROPE Srl	Italy

A specific characteristic of the cooking appliance sector is the relative importance of Original Equipment Manufacturers (OEMs) - producers of appliances for other brands. OEMs are in general small and medium size companies. According to CECED, 25% of the European cooking production is not manufactured by the brand itself, but by an OEM.

Table 2-43 presents estimates of the breakdown of overall sales in the EU-27 taking place directly to the customer (e.g. using online stores etc.) and those taking place through retailers and wholesalers, respectively for domestic hobs and grills.

Table 2-43: Estimation of the breakdown of domestic hobs/grills sales mechanism (source CECED)

Type of appliance	Direct sales to customer (%)	To retailers (%)	To wholesalers (%)
Hobs	6%	59%	35%
Grills	5%	35%	60%

Table 2-44 presents estimates on the location of manufacturing centres in the EU. The purpose of this table is to indicate where the production takes place; however other countries outside EU produce appliances consumed inside EU and the manufacturing centres located in Table 2-44 Member States produce appliances sold outside EU. For a general idea of the production and apparent consumption refer to section 2.1.

Table 2-44: Manufacture and distribution centres responsible for the sale of domestic hobs/grills in EU (adapted from Prodcom, 2008)

Manufacturing in the EU	
Member State	Estimated share of the units sold in the EU (%)
Poland	33%
Italy	19%
Germany	15%
UK	14%
France	3%
Others	16%

2.3.2. LATEST CONSUMER TRENDS

A range of different technologies and hob types is available. New purchase decisions may be influenced by factors such as past experience, price, aesthetics and how easy the hob is to clean. Electric induction hobs are the most energy efficient type of electric hob when considering a heating-up phase but are more expensive to buy than other types. In the case of simmering over a long period, this technology shows only little differentiation compared to solid plates or radiant hobs. Factors such as speed of heating, ease of cleaning, safety and touch control make them an attractive prospect to those able to afford them. Gas hobs can be more carbon efficient in use than electric hobs (depending on the original energy source for electricity generation), and may be capable of improved efficiency as new burner designs are developed.

According to an article published in the Independent Electrical Retailer²³, when consumers are looking to buy range cookers, energy efficient products present an attractive proposition, as people look to save both money and the environment. This may be the reason why the electric fuel sector in range cookers is experiencing growth and is challenging dual fuel as the preferred type.

It is pointed out how sales choices have shifted from being purely based on high performance or the aesthetic looks of the equipment towards finding a complete cooking solution with more specialised, quality products. The new kitchen buyers are looking for²³:

- Minimalism
- Professional appearance
- Aesthetic appeal

²³ www.independentelectricalretailer.co.uk/news/fullstory.php/aid/1095/Top_range.html

The 2005 Guide on Built-in Cooking Equipment⁸ mentions the diversity of choices in cooking appliances even though there are only two sources of energy (electric or gas). In the hobs category, options include induction, radiant, halogen, gas or combined models, in several materials, sizes and configurations that reflect the role aesthetics plays in the selection of household appliances. Induction hobs still represent the latest technology released with ongoing improvements to better adapt to traditional kitchens. These adaptations include reduction of the thickness (i.e. the depth below the work surface) to make installation easier, or providing standard sizes (56 x 49 cm) to fit in traditional spaces. The trends in product-design are summarized in the following features:

■ Materials

A selection of different materials is available for all types of hobs, ranging from stainless and enamelled steel, to tempered glass or glass-ceramic. The material also allows the choice of different colours to go with the kitchen design: black and white are predominant, with new options such as bronze. According to the Independent Electrical Retailer²⁴, owners of traditional kitchens tend to prefer classic enamelled finishes like burgundy, black and cream but stainless steel remains as the most popular choice.



1. White enamelled steel electric hob from Bosch



2. Glass-ceramic hob from Electrolux



3. Bronze enamelled steel gas hob from Fagor

²⁴ www.independentelectricalretailer.co.uk/news/fullstory.php/aid/1095/Top_range.html

■ Safety controls

For hobs with integrated controls, a new range of features aiming to improve the cooking experience and make it safer for the user have been added:

Child Safety	Locks all the hob functions. It prevents the hob being turned on or changing currently defined parameters.
Cooking pot Safety	Equipped with an automatic detection system, the hob will go off automatically if the pot is removed. It cannot be started unless the receptacle is big enough to cover the cooking zone.
Overheating Safety	If the cooking zone is overheated the power or the temperature will automatically go down.
Anti-spilling Safety	If a liquid is spilled over the command zone, the hob will automatically go off.
Heat witnesses	A red light present in the hob warns users of the presence of residual heat. It helps to know when the hob is still hot to avoid burns.
Time Safety	The hob turns off automatically after a certain time of use.

■ Easy cleaning

Other features such as electronic touch controls make cleaning easier. In the case of surfaces that do not warm up, such as in the induction type, the spilled food will not burn.

Programmable functions to control cooking times or “booster” options to reduce the time of boiling water are also found in induction, halogen and radiant hobs.

From the manufacturer’s point of view, since hobs are not subject to minimum efficiency standards or a labelling programme, the trend is to concentrate more on styling, ease of cleaning, and matters other than energy efficiency. It is believed by some that new hobs are not achieving breakthroughs in energy saving technologies due to this factor²⁵.

■ Induction technology and pans

Models of hob which work with aluminium and copper pans are currently emerging on the market. Their energy efficiencies are still uncertain and may hinder their market penetration. This development will be covered in more detail in Task 6.

²⁵ Rocky Mountain Institute (2004), “Home Energy Briefs - #8 KITCHEN APPLIANCES”.

2.3.3. COMMERCIAL SECTOR MARKET STRUCTURE AND TRENDS

HKI reports that the large kitchen manufacturing industry - which include ovens, hobs, refrigerators, fryers, ventilation systems, dishwashers, etc - had a turnover of 3 billion Euros in 2009 and it employed 25,000 staff. There are more than 70 members in this association that represent Germany and other MS manufacturing companies.

Commercial equipment is characterized by its diversity and high standards, where most of the appliances are custom made or adapted for each individual user.

The UK Catering Equipment Suppliers' Association (CESA) reports some factors that can affect the industry related to consumer's behaviour and rising prices of raw materials:

- Consumers increasingly follow the trend to eat out and this helps industry growth in spite of other situations that influence market behaviour. (This may not be true at EU level, especially for new Member States)
- Other factors that may affect the industry from the inside are the rising prices of raw materials such as stainless steel and the increasing cost of electricity that raises the production costs.

Increased production costs are relevant to the consumer of commercial appliances because normally those are transferred to the price of goods. In terms of equipment requirements in the commercial sector, choices are strongly dependant on factors such as ownership (whether franchised or not), public vs. private sector, style of food preparation (from scratch or pre-prepared foods).

The main suppliers within the UK market are listed below:

- Electrolux
- Enodis
- Falcon
- Hobart
- Lincat
- Rational

Other important manufacturers are MKN and Convotherm in Germany, Charvet in France, Electrolux professional in Italy, among others.

Regarding distribution channels, sales are handled by distributor or dealers half the time and half directly by the manufacturer.

2.4. CONSUMER EXPENDITURE BASE DATA

2.4.1. AVERAGE CONSUMER PRICES

■ Product selling price

Average product price varies a lot depending on the technology, the size as well as aesthetics criteria and additional features. Regarding hobs, however, electric solid plates are the cheapest type, followed by gas, radiant and induction hobs. This average ranking also correlates with the energy efficiency of these types of hobs (i.e. solid plate hobs are the least and induction hobs the most energy efficient when it comes to heating up and boiling food items – the difference seems less relevant when it comes to simmering). Indicative prices are given in the table below.

Table 2-45: Purchase cost of hobs per type and grills

Type of hob/grill (4 cooking zones)	Domestic appliances			Commercial appliances		
	Low range (€)	High range (€)	Average price (€) ²⁶	Low range (€)	High range (€)	Average price (€)
Solid plates	100	300	137	-		2,900
Radiant hob	150	650	380	-		-
Induction hob	300	1,200	810	-		-
Gas hob	130	1,000	268	800	4,000	2,950
Range cooker	160	1,500	-	1,500	12,000	
Electric grill	80	1,500	-	1,500	5,000	2,300
Gas grill	100	1,500	-	1,500	5,000	2,400
Charcoal grill	50	1,500	-	500	5,000	

The life cycle cost of an appliance comprises the costs related to its purchase, installation, use, maintenance, repair, disposal, etc. In the case of products considered under the study it is believed that other costs (excluding purchase costs and use costs) are negligible for domestic appliances. However, installation might not be negligible for replaced appliances (those not installed within a new kitchen) as it can represent from 10 to 15% of the price of the appliance, according to CECED.

Regarding commercial appliances, installation and maintenance/repair costs have been determined based on manufacturers' feedbacks and they are presented in Table 2-46

²⁶ Source: GfK Retail and Technology GmbH. Member States not covered by the market panel: Cyprus, Denmark, Estonia, Latvia, Lithuania, Luxembourg, Malta

Table 2-46: Additional costs for commercial hobs and grills

Commercial appliances	Installation costs (€)	Repair and Maintenance costs (€)
Electric hob	60	980
Gas hob	60	400
Electric grill/fry-top	60	920
Gas grill/fry-top	60	1,130

2.4.2. RATES FOR RUNNING COST AND DISPOSAL

■ Running costs

The most significant cost in running a hob is the cost of energy. Electricity and gas prices for households in Member States are presented below. The EU average will be used in Life Cycle Cost (LCC) calculations at a later stage of the study (Task 5).

➤ ELECTRICITY RATE

Electricity costs have to be taken into account for cooking appliances. The evolution of electricity rates between 2007 and 2009 as well as the rates depending on the customer's consumption are given as reported by Eurostat in Figure 2-20 and Figure 2-21

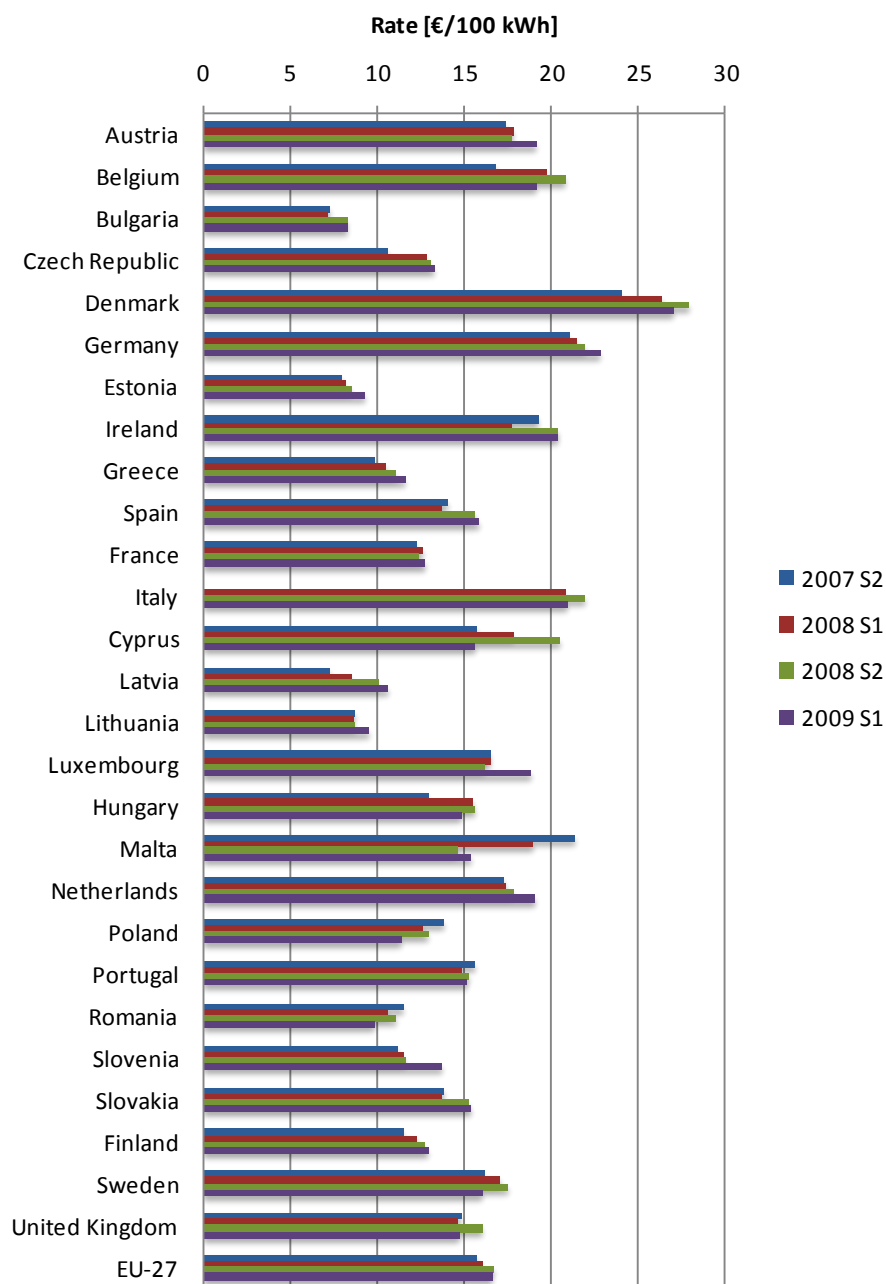


Figure 2-20: The evolution of electricity rates between mid -2007 and mid-2009 for domestic customers (2500-5000 kWh) in EU-27 (taxes included)

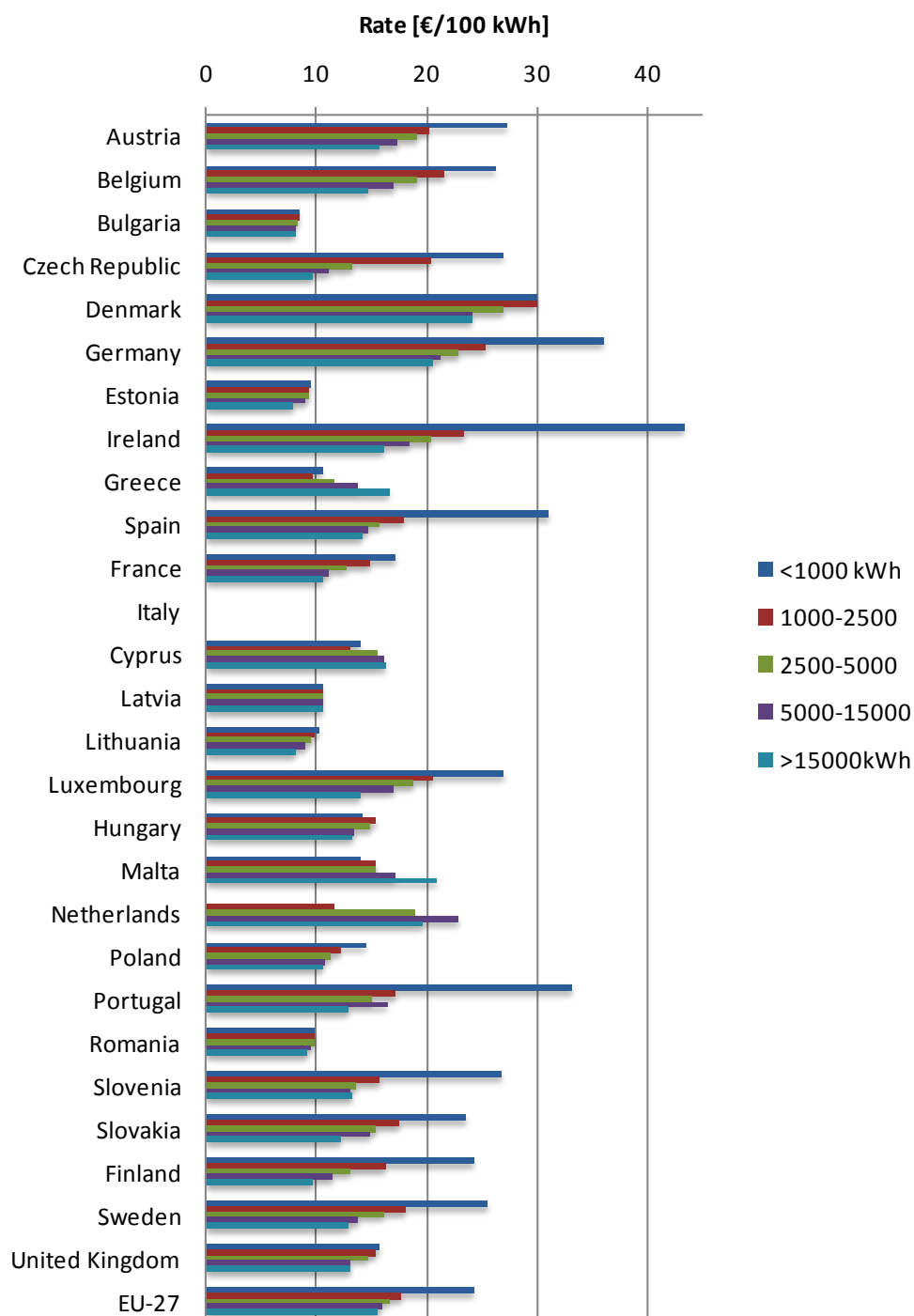


Figure 2-21: Electricity rates in the first semester of 2009 according to customer's consumption in EU-27 (taxes included)

The average electricity consumption of a European household in 2007 was 4000 kWh/household which means an estimation of the rates in the category [2500-5000 kWh] can be used, that is a rate of 16.58 €/100 kWh²⁷. For commercial applications, the

²⁷ Enerdata Energy Efficiency/CO₂ Indicators available at: www.worldenergy.org/documents/ueur27.pdf

higher category (>15 000 kWh) will be used, that is to say an estimation of the rate of 15.54 €/100 kWh.

➤ NATURAL GAS RATES

Natural gas costs have to be taken into account for cooking appliances. The evolution of the natural gas rates between 2007 and 2009 as well as the rates depending on the customer's consumption as reported by Eurostat are presented in Figure 2-22 and Figure 2-23.

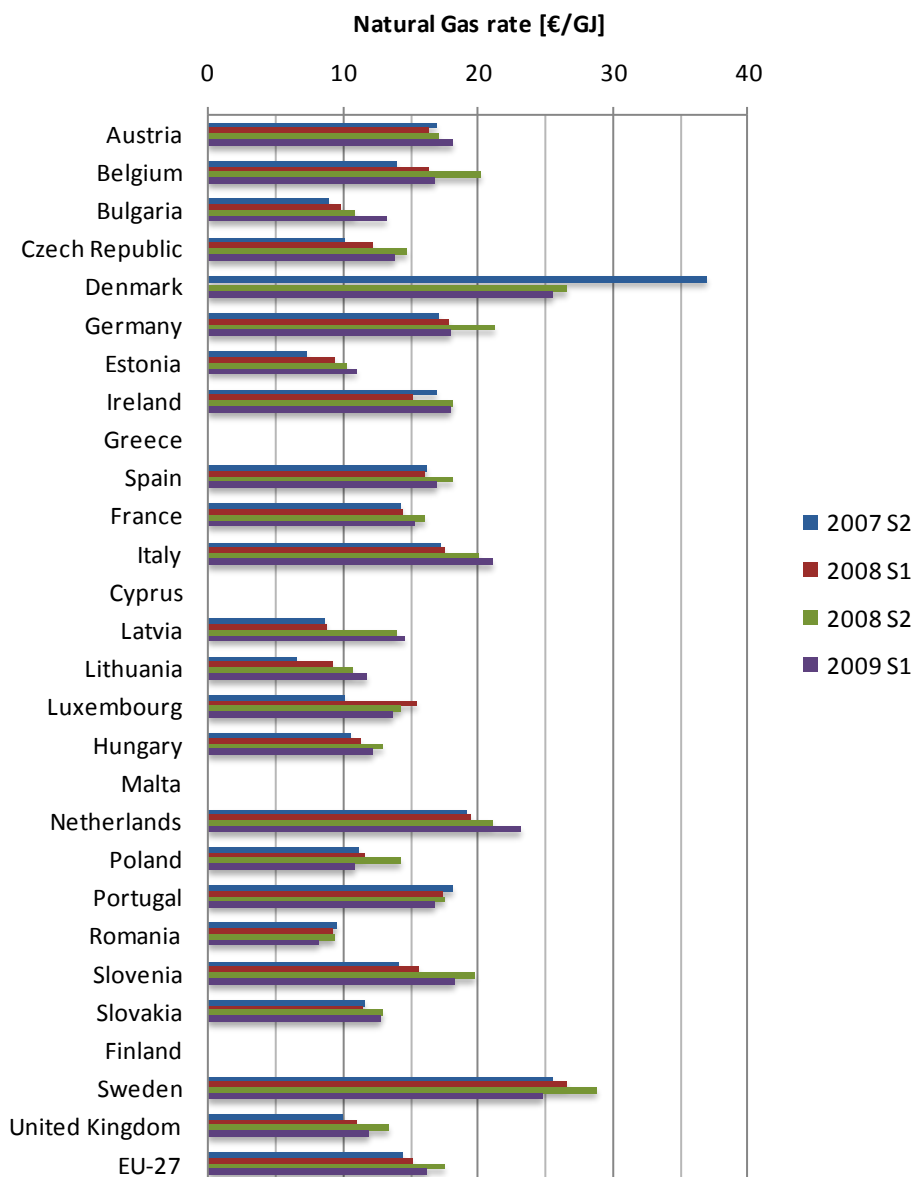


Figure 2-22: Natural gas rate (including taxes) for consumers in the range between [20-200 GJ] between mid-2007 and mid-2009 in EU-27 (taxes included)

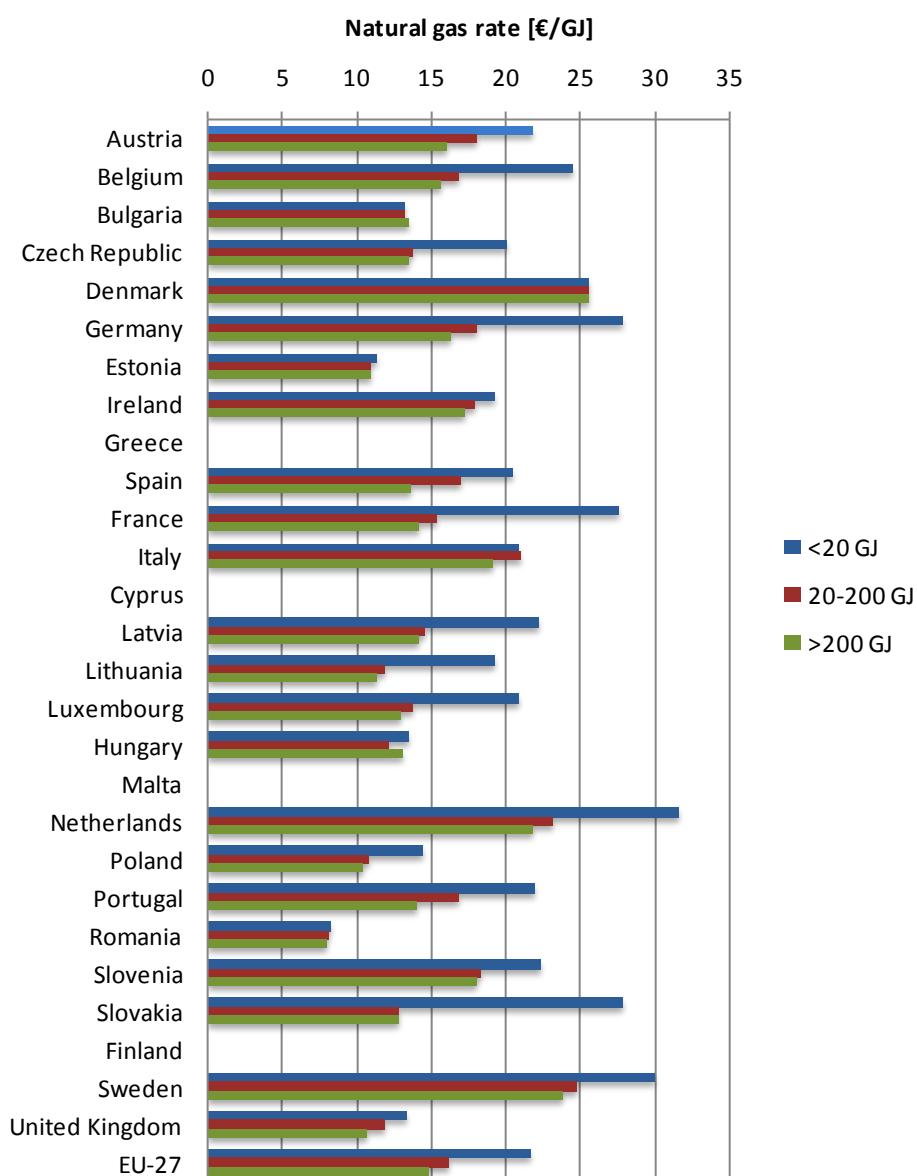


Figure 2-23: Natural gas rate according to the customers consumption in EU-27 (taxes included)

The annual consumption of a European household is around 84 GJ which means rates of the category [20-200 GJ] should be used for households, that gives an estimation of the rate of 16.21 €/GJ²⁸. For commercial applications, the higher category (>200 GJ) will be used, which means an estimation of a rate of 14.81 €/GJ.

To summarise, the following energy rates in Table 2-47 will be used:

²⁸ Eurostat (2006), "Gas prices for EU households and industrial consumers on 1 January 2006".

Table 2-47: Estimation of the rates for gas and electricity

	Estimation of the Rate	
Category	Electricity (€/100 kWh)	Gas (€/GJ)
Domestic use	16.58	16.21
Commercial use	15.54	14.81

■ Disposal costs

The different end-of-life routes of hobs will be analysed in Task 3, Section 3.3.

Under the WEEE Directive 2002/96/EC, consumers can dispose of electrical and electronic appliances without charge. Eventually, the costs of WEEE collection and treatment are likely to be integrated in the product prices, but at present the disposal of existing stock of appliances is free to the consumer. The eventual effect on price is expected to be negligible.

The pending recast of the WEEE Directive may not concern commercial appliances. Specialised disposal companies are taking care of old appliances. They will recycle or re-use them for new applications.

In some Member States such as France, an eco-participation fee is added to the purchase price according to the WEEE categories. In the Category I “Large household appliances”, the following fees are applied to different items as shown below²⁹:

Table 2-48: Eco-participation fees for products covered by Lot 23

Type of appliance	Eco-participation fee
Range cooker	6 €
Hob	2 €

2.4.3. INTEREST AND INFLATION RATES

Table 2-49 shows interest rates for the EU-27 as published by Eurostat and the European Central Bank (ECB).

Table 2-49: Average interest rates for EU-27

Member State	2006	2007	2008
Austria	3.79%	4.29%	4.27%
Belgium	3.81%	4.33%	4.42%
Bulgaria	4.18%	4.54%	5.38%
Czech Republic	3.80%	4.30%	4.63%
Denmark	3.81%	4.29%	4.30%
Germany	3.76%	4.22%	4.00%

²⁹ Eco-participation in France: www.eco-systemes.com/documents/Bareme_EcoParticipations.pdf

Member State	2006	2007	2008
Estonia	5.01%	6.09%	8.16%
Ireland	3.77%	4.31%	4.53%
Greece	4.07%	4.50%	4.81%
Spain	3.78%	4.31%	4.37%
France	3.80%	4.30%	4.24%
Italy	4.05%	4.49%	4.69%
Cyprus	4.13%	4.48%	4.60%
Latvia	4.13%	5.28%	6.43%
Lithuania	4.08%	4.55%	5.61%
Luxembourg	3.91%	4.56%	4.61%
Hungary	7.12%	6.74%	8.24%
Malta	4.32%	4.72%	4.81%
Netherlands	3.78%	4.29%	4.23%
Poland	5.23%	5.48%	6.07%
Portugal	3.91%	4.43%	4.53%
Romania	7.23%	7.13%	7.70%
Slovenia	3.85%	4.53%	4.61%
Slovakia	4.41%	4.49%	4.72%
Finland	3.78%	4.29%	4.30%
Sweden	3.70%	4.17%	3.90%
United Kingdom	4.38%	5.06%	4.51%
EU-27	4.08%	4.57%	4.55%

Table 2-50 shows interest rates for the EU-27 as published by Eurostat and the European Central Bank (ECB).

Table 2-50: Most recent inflation rates for EU-27

Member State	2006	2007	2008
Austria	1.70%	2.20%	3.20%
Belgium	2.30%	1.80%	4.50%
Bulgaria	7.40%	7.60%	12.00%
Czech Republic	2.10%	3.00%	6.30%
Denmark	1.90%	1.70%	3.60%
Germany	1.80%	2.30%	2.80%
Estonia	4.40%	6.70%	10.60%
Ireland	2.70%	2.90%	3.10%
Greece	3.30%	3.00%	4.20%
Spain	3.60%	2.80%	4.10%
France	1.90%	1.60%	3.20%
Italy	2.20%	2.00%	3.50%
Cyprus	2.20%	2.20%	4.40%
Latvia	6.60%	10.10%	15.30%

Member State	2006	2007	2008
Lithuania	3.80%	5.80%	11.10%
Luxembourg	3.00%	2.70%	4.10%
Hungary	4.00%	7.90%	6.00%
Malta	2.60%	0.70%	4.70%
Netherlands	1.70%	1.60%	2.20%
Poland	1.30%	2.60%	4.20%
Portugal	3.00%	2.40%	2.70%
Romania	6.60%	4.90%	7.90%
Slovenia	2.50%	3.80%	5.50%
Slovakia	4.30%	1.90%	3.90%
Finland	1.30%	1.60%	3.90%
Sweden	1.50%	1.70%	3.30%
United Kingdom	2.30%	2.30%	3.60%
EU-27	2.30%	2.40%	3.70%

2.5. CONCLUSIONS OF TASK 2

This task presented the economic and market analysis related to domestic and commercial hobs and grills for the purpose of the lot 23 Ecodesign preparatory study.

Data for the domestic sector is comprehensive and demonstrates that units in all categories are sold in a number of units above the required criteria of 200,000 units per year as set in the Ecodesign Directive.

Concerning domestic hobs, electricity is the preferred energy source at the EU level, although there are strong differences between Member states. The sales of solid plate hobs are expected to decrease in the coming years, while induction hobs sales should rise. The share of gas hobs should remain stable. Regardless of the energy source, most of the appliances sold in 2007 were built-in with four cooking zones.

Given the diversity in the domestic grills market, only estimations could be provided. Following the current trend, the stock of these appliances should grow until 2020.

Data for the commercial sector is sparse and more difficult to obtain. Market figures were gathered by direct discussion with manufacturers, cross-comparison of information and extrapolation from the oven market, whose estimations seem more reliable. The number of units sold in the market is lower than the threshold established by the Ecodesign Directive, however the intensity of use studied in Task 3 may demonstrate the relevance to include the products under the study.

The accuracy of the figures presented in this task can be challenged but they are believed to provide a robust estimate for the purpose of this study. They show the yearly sales of products in the different categories of Lot 23 and the importance of certain products in some categories over others.

The data presented in Task 2 will form the basis for selecting the most representative products on the European market and eventually formulating the base-case(s) in Task 5. Further, product price and lifetime are also key inputs for the Life-Cycle-Cost analysis using EcoReport in Tasks 5 and 7.

ANNEX

This Annex contains tables providing the data used to produce some of the figures presented the report.

■ Figure 2-7: Estimated sales of hobs in the UK

Table 2-51: Estimated sales and forecasts of hobs in UK between 1998 and 2020

Year	Induction hobs	Electric hobs	Gas hobs
1998	0	648,278	871,134
1999	0	681,179	895,275
2000	0	707,733	904,481
2001	0	723,853	896,644
2002	0	734,642	882,331
2003	7,399	732,467	866,194
2004	10,809	709,780	830,495
2005	13,882	680,235	798,262
2006	16,577	646,502	773,741
2007	17,910	579,078	720,109
2008	19,813	546,277	717,827
2009	21,578	517,871	727,313
2010	25,962	493,284	747,297
2011	25,346	481,574	775,674
2012	24,898	473,071	803,562
2013	25,124	477,358	840,809
2014	25,718	488,649	878,539
2015	26,606	505,508	914,414
2016	27,691	526,122	946,476
2017	28,289	537,492	958,152
2018	29,462	559,770	978,391
2019	30,526	579,997	991,792
2020	31,403	596,654	998,422

■ **Figure 2-16: Domestic Hobs' Stock in the UK**

Table 2-52: Estimated stocks and forecast of domestic hobs in UK between 1990 and 2020

Year	Induction hobs	Electric hobs	Gas hobs
1990	0	10,280,640	12,292,347
1991	0	10,436,171	12,410,436
1992	0	10,508,143	12,532,678
1993	0	10,574,510	12,663,857
1994	0	10,669,150	12,753,184
1995	0	10,796,773	12,800,203
1996	0	10,914,439	12,852,123
1997	0	11,024,225	12,911,147
1998	0	11,128,240	12,979,450
1999	0	11,228,615	13,059,415
2000	0	11,327,485	13,154,163
2001	0	11,424,394	13,262,714
2002	0	11,524,664	13,390,831
2003	7,399	11,625,787	13,543,835
2004	18,207	11,716,591	13,703,748
2005	32,090	11,797,602	13,870,381
2006	48,667	11,869,406	14,043,528
2007	66,576	11,900,103	14,183,281
2008	86,388	11,923,087	14,328,846
2009	107,964	11,938,791	14,479,927
2010	133,920	11,944,904	14,636,218
2011	159,251	11,946,751	14,797,401
2012	184,116	11,939,386	14,956,834
2013	209,169	11,927,667	15,120,433
2014	234,747	11,911,615	15,287,840
2015	261,085	11,891,362	15,458,689
2016	288,295	11,867,174	15,632,600
2017	315,762	11,828,475	15,794,126
2018	343,890	11,786,993	15,957,776
2019	372,350	11,743,466	16,123,136
2020	400,700	11,698,763	16,289,784