

MARKET TRANSFORMATION PROGRAMME

Supporting UK Government policy on sustainable products

2008/2009 Energy Label Market Picture Testing – **Domestic Electric Ovens**

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Executive Summary

This report outlines the results of energy efficiency label tests carried out on a range of domestic electric ovens to provide market intelligence for Defra's Sustainable Consumption and Production (SCP) Programme through the Market Transformation Programme (MTP).

24 products for testing were selected from ranges of ovens available on the market and purchased over the Internet.

All tests were carried out between December 2008 and March 2009 in a UKAS accredited test laboratory.

- 11 out of the 24 appliances tested (46%) performed in accordance with all the declarations on the labels.
- 13 out of the 24 appliances tested (54%) did not perform in accordance with one or more declarations on the labels
- 1 out of the 24 appliances tested (4%) did not perform in accordance with the energy efficiency class declaration due to an incorrect usable volume measurement changing the size from large to medium thus requiring the use of lower class limits.
- 2 out of the out of the 24 appliances tested (8%) did not perform in accordance with the energy consumption declarations. Of these 1 had a measured value outside the tolerance specified and 1 had a value declared on the label for a non-existent conventional heating function.
- 1 out of the out of the 24 appliances tested (4%) did not perform in accordance with the size declaration due to incorrect measurement of usable volume.

13 out of the 24 appliances tested (54%) did not perform in accordance with the usable volume declarations. This was the most commonly un-achieved performance parameter. Discussions between the manufacturers' and Defra's appointed independent accredited test laboratories revealed that in the majority of cases this was due to a lack of clarity in the current standard. The lack of precise wording can give rise to different interpretations of how the dimensions are to be measured. In the Defra results, the dimensions were measured using one interpretation of the

method while the manufacturers' results were obtained using another interpretation, giving rise to the differences in the reported usable volumes. A new version of the standard is due to come into force at the end of 2009 which defines a precise and unambiguous method of measurement but until the Official Journal of the European Communities is amended to reference this new version, the older version, with its opportunities for interpretation, will remain in use as the required standard for verification of energy labelling performance parameters.

1. Selection and Purchase of Test Samples

The brand selection covers the top selling brands in terms of units sold based on 2007 GFK market data. It was decided to test one sample from each of the top 20 brands that cover 81% of the market and in addition one extra sample from 4 of the top 6 brands representing 35% of the market. This was felt to give a good balance between focusing on the big selling brands while still covering a wide range of brands.

The type of appliance, i.e. built-in/freestanding, double/single oven, for each model is selected to broadly reflect the range of ovens in that brand in terms of proportion of sales and time on market. Research was carried out by visiting on-line purchasing sources to check availability of these models and in some cases they were substituted for newer models to avoid issues with availability and obsolescence.

Some of the major brands tested in 2005 and 2004 were retested this time around but different brands at the smaller share end of the market have been selected for this programme.

1.1 Sampling Plan

For the purposes of compliance with the labelling requirements of the Energy Information (Household Electric Ovens) Regulations 2003, transposing Commission Directive 2002/40/EC of 8th May 2002, the specified standard requires one sample of the model to be tested initially. If the results show the sample to be achieving its declared performance, then the model is considered compliant. If any of the measurements fall outside the tolerances allowed by the standard, then a further three samples must be tested. If the averaged measurements from these three samples are within the allowed tolerances then the model is considered compliant. The Defra testing was carried out to gain a market picture of the current status of energy labelling, not for the purposes of legal enforcement, so only one sample of each model was measured. If any of the measurements fell outside the tolerances allowed by the standard, then the sample was considered not to have achieved the performance declared on the energy label for the purposes of this market testing. However this is not meant to imply that the model does not comply with the legal energy labelling requirements as a further three samples would need to be tested to ascertain this.

In this event, manufacturers were offered the opportunity to carry out testing on a further three samples of the model at their own cost and if considered valid and appropriate these results were to be published alongside the Defra results. These samples were to be purchased from a retail outlet and tested at an accredited laboratory. If the averaged measurements of the performance parameters from these three samples are within the allowed tolerances then the model is considered to have achieved the performance declared on the energy label for the purposes of this market testing. (See Section 3)

2. Selection of Test Laboratory

2.1 Defining the measurement standards to be used

The testing of appliances to determine and verify energy label parameters for household electric ovens is governed by Commission Directive 2002/40/EC of 8th May 2002 implementing Council Directive 92/75/EEC as transposed into UK law by the Energy Information (Household Electric Ovens) Regulations 2003. Testing to determine energy label parameters in the UK is carried out in accordance with the UK regulations and to measure the parameters, the regulations require the use of harmonized standards, which are published in the Official Journal of the European Communities for this purpose,

The standard currently referenced in a Commission Communication of January 2001, published in Journal entry 2002/C 242/06 and specified in the UK transposed regulations is EN 50304:2001.

On this basis, tests and measurements were carried out according to the following harmonised standard:

- EN 50304:2001 Electric ovens for household use – Methods for measuring energy consumption. Incorporating Corrigendum No. 1.

2.2 The tender specifications and selection criteria

As a result of the new Defra policy of naming the manufacturers whose products have been tested, it was essential that laboratories selected should be able to demonstrate the highest possible level of confidence in the validity of their results. It was decided that the best way of achieving this was to seek laboratories within the EU that were accredited by their national accreditation body against the test and calibration laboratory competence and management system standard ISO 17025:2005 and who had the required energy labelling performance test standards listed on their accreditation schedule. This would mean that the laboratory had been assessed for competence in carrying out the actual tests and measurements required in addition to having had its quality system audited. It was recognised early on that finding a large number of such laboratories would be difficult so having such an accreditation was not made an absolute requirement. Laboratories with less appropriate levels of third party accreditation such as the ISO 9001 or ISO 14001 would also be considered in exceptional circumstances and this was reflected in the tender specification.

All tests were carried out between December 2008 and February 2009 in an accredited test laboratory selected according to the above criteria.

3. Assessment Criteria for Ovens used in these results

The label requires 4 performance parameters to be declared. Of these, the energy consumption and the usable volume are directly measurable according to the standard. The energy efficiency class and the size category are determined from the tables in The Energy Information (Household Electric Ovens) Regulations 2003 using the measured values of energy consumption and usable volume. The size range determines the appropriate energy class table to use.

3.1 Assessment Criteria of Measured Parameters

The standard allows tolerances (or variances) in the measurement of these criteria compared to the declared values.

3.1.1 Criteria for Energy Consumption and Usable Volume

Where the value measured is within the tolerances allowed by the standard, the declared performance parameter is considered to have been achieved.

Where the value measured is outside the tolerances allowed by the standard, the declared performance parameter is considered not to have been achieved.

3.1.2 Criteria for Size Category

Where the measured usable volume is inside of the measurement tolerances allowed by the standard but falls into another size category band that causes the size band to change, the declared size category is considered to have been achieved and the table in Schedule 4 of the Energy Information (Household Electric Ovens) Regulations 2003 appropriate to the declared size category is used to determine the energy efficiency class.

Where the measured usable volume is outside of the tolerances allowed by the standard and this causes the size band to change, the declared size category is considered not to have been achieved and the table in Schedule 4 of the Energy Information (Household Electric Ovens) Regulations 2003 appropriate to the measured size category is used to determine the energy efficiency class.

3.2 Assessment Criteria for Energy Efficiency Class

Where the class calculated from the measured energy consumption and the size range is the same as or higher than that declared and the measured energy is within the tolerances allowed by the standard, the declared energy class is considered to have been achieved.

Where the class calculated from the measured energy and the size range is the same as or better than that declared but the measured energy is outside the tolerances allowed by the standard, the declared energy class is considered to have been achieved.

Where the class calculated from the measured energy and size range is lower than that declared but the measured energy is within the tolerances allowed by the standard, the declared energy class is considered to have been achieved.

Where the class calculated from the measured energy and size range is lower than that declared but the measured energy is outside the tolerances allowed by the standard, the declared energy class is considered not to have been achieved.

Where the measured usable volume is outside of the tolerances allowed by the standard causing the size band to change giving rise to a lower class than that declared, the declared energy class is considered not to have been achieved.

4. Testing Results and Tables

4.1 Overall Summary of Test Results

Table 1. Numbers of Products Tested Performing/Not Performing in Accordance with Declarations on the Label			
Label Declarations	Number of products tested Performing to Declarations	Number of products tested Not Performing to Declarations	% of Product Tested Not Performing to Declarations
Energy Efficiency Class	23	1	4
Energy consumption (kWh)	22	2*	8
Usable Volume (L)	11	13	54
Size	23	1	4
All	11	13	54
* 1 of these 2 appliances lists conventional and forced air energy consumption on the label, but the appliance only has a forced air function			

The table above indicates that

- 11 out of the 24 appliances tested (46%) performed in accordance with all the claims on the labels.
- 13 out of the 24 appliances tested (54%) did not perform in accordance with one or more declarations on the labels
- 1 out of the 24 appliances tested (4%) did not perform in accordance with the energy efficiency class claim due to the usable volume measurement changing the size from large to medium thus requiring the use of lower class limits.
- 2 out of the out of the 24 appliances tested (8%) did not perform in accordance with the energy consumption claims. Of these 1 had a measured value outside the tolerance

specified and 1 had a value declared on the label for a non-existent conventional heating function.

- 13 out of the 24 appliances tested (54%) did not perform in accordance with the usable volume claims. Of these 7 measured smaller than claimed and 6 measured larger.
- 1 out of the out of the 24 appliances tested (4%) did not perform in accordance with the size claim due to incorrect measurement of usable volume.

The 24 appliances totalled 36 cavities and the declared energy efficiency classes consisted of 17 A, 15B and 4 C class cavities.

The ovens selected performed well against their claimed energy efficiency and energy consumption. Only one model failed to achieve its declared energy efficiency class with a measured class of C against a declared B and this was due to a size category change caused by a difference in measurement of the usable volume from that declared by the manufacturer. One other model failed to achieve its declared value of energy consumption and one model claimed an energy consumption value for a function that did not exist.

The most commonly un-achieved performance parameter was usable volume where 13 models failed to achieve their measured values. Discussions between Defra the manufacturers and their respective appointed independent accredited test laboratories revealed that in the majority of cases this was due to a lack of clarity in the current standard. The lack of precise wording can give rise to different interpretations of how the dimensions are to be measured. This accounts for the results of the measurements made by the Defra laboratory (using one interpretation), showing models not to have achieved the declared usable volume, while the manufacturer appointed independent accredited laboratories' results or their own factory testing results (using a different interpretation), show models achieving the declared usable volume.

A new version of the standard is due to come into force at the end of 2009 which defines a precise and unambiguous method of measurement but until the Official Journal of the European Communities is amended to reference this new version, the older version, with its opportunities for interpretation, will remain in use as the required standard for verification of energy labelling performance parameters.

Comments are made in the individual results where this situation pertains and manufacturers have offered test results or other information to demonstrate their interpretation.

4.2 Brand Performance

The following table shows how well the brands selected and tested performed against their declared values for energy efficiency class, energy consumption, usable volume and size category.

Table 2. Indicating where Brands are Achieving/not achieving the Claims on the Label					
X indicates that the product did not achieve the performance values and/or energy efficiency class declared on the label					
Brand	Model	Label Performance Parameters			
		Energy Efficiency Class	Energy Consumption (kWh)	Usable Volume (L)	Size
Matsui	MSF60SS		X	X	
Kenwood	CK270			X	
Baumatic	B904.1SS-B				
Smeg	SC371MFX				
Neff	U1422NOGB			X	
Neff	U1722NOGB			X	
Bosch	HBN430551B/01				
AEG Electrolux	B4101-5-M			X	
Ignis	AKL 906/IX				
Rangemaster	Classic 90 Dual Fuel				
Indesit	K3E1(W)/G				
Zanussi	ZKC6020W			X	
Belling	358 An 00799				
Hotpoint	SY56X/1			X	
Belling	XOU70FP MK II			X	
Cannon	Cucina C60EKW	X		X	X

Bosch	HBN131521B				
Stoves	Sterling 1000DF Black			X	
Hotpoint	Creda C367EWH			X	
Whirlpool	AKP 201/IX				
Beko	D 532 S				
Electrolux	EOB 53000K Black		X	X	
New World	NW60F 444447283			X	
Tricity Bendix	SE500/1X				

4.3 Summary Tables of Test Results by Brand

Red Italics indicate that the product has not achieved the performance values and/or energy efficiency class declared on the label

Label Parameter		Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size	
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)				Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l
										Medium	35 l ≤ vol. < 65 l
										Large	65 l ≤ vol.
		Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured
Brand and Model		Matsui MSF60ss									
Market Picture Testing Results:											
Cavity 1	Forced Air	B	B	0.86	0.88	<0.98	55	<i>59</i>	52.2 to 57.7	Medium	Medium
	Conventional			0.82	<i>0.96</i>	<0.94					
Measured performance:											
<p>This model did not achieve its declared value of usable volume. In addition it did not achieve its declared energy consumption for the conventional heating function. Its energy efficiency class was not affected as this has been declared based on the forced air energy consumption.</p>											
Manufacturer's Response:											
<p>The Manufacturer accepted the results for energy consumption as 0.96 kWh and has stated that the label has been changed in production and at retail outlets. The manufacturer challenged the measurement of usable volume.</p>											
Defra Comments:											
<p>Discussion with the manufacturer and Defra's independent accredited laboratory, revealed that the differences in measurement of cavity size arose from lack of clarity in the standard, allowing for difference in interpretation of how oven depth should be measured. A new version of the standard is due to come into force at the end of 2009 which defines a precise and unambiguous method of measurement but until the Official Journal of the European Communities is amended to reference this new version, the older version, with its opportunities for interpretation, will remain in use as the required standard for verification of energy labelling performance parameters.</p>											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Kenwood CK270										
Market Picture Testing Results:											
Cavity 1	Forced Air	C	B	1.19	0.95	<1.35	57	64	54.1 to 59.8	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional	B	A	0.92	0.76	<1.05	35	39	33.2 to 36.7	Medium	Medium
Measured performance:											
This model did not achieve the declared values of usable volume for either of its two cavities.											
Manufacturer's Response:											
The manufacturer challenged the results.											
Defra Comments:											
Discussions with the manufacturer and the test laboratory revealed that the manufacturer had been measuring the oven cavity height incorrectly. The manufacturer agreed to re-label models using the correct method.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Baumatic B904.1SS-B										
Market Picture Testing Results:											
Cavity 1	Forced Air	B	B	0.99	0.86	<1.13	53	54	50.3 to 55.6	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional	C	B	0.99	0.73	<1.13	32	32	30.4 to 33.6	Small	Small
Measured performance:											
This model achieved all its declared label parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Smeg SC371MFX										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	B	0.79	0.84	<0.91	51	49	48.4 to 53.5	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional										
Measured performance:											
This model achieved all its declared label parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Neff U1422NOGB										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.70	<0.91	58	62	55.1 to 60.9	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional	B	B	0.79	0.65	<0.91	30	31	28.5 to 31.5	Small	Small
Measured performance:											
This model did not achieve the declared value of usable volume for one of its two cavities.											
Manufacturer's Comments:											
The manufacturer accepts the findings of the report in relation to declared usable volume for the Neff model U1422NOGB, and confirm our intention to amend the published usable capacity information for all affected models as soon as possible.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Neff U1722NOGB										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.60	<9.1	45	50	42.7 to 47.2	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional	B	B	0.79	0.60	<9.1	30	30	28.5 to 31.5	Small	Small
Measured performance:											
This model did not achieve its declared value of usable volume for one of its two cavities.											
Manufacturer's Response:											
The manufacturer accepts the findings of the report in relation to declared usable volume for the Neff model U1722NOGB and confirm our intention to amend the published usable capacity information for all affected models as soon as possible.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Bosch HBN430551B/01										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.69	<0.91	58	58	55.1 TO 60.9	Medium	Medium
	Conventional			0.89	0.81	<1.02					
Measured performance:											
This model achieved all its declared label parameters.											

Label Parameter		Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size	
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)				Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l
										Medium	35 l ≤ vol. < 65 l
										Large	65 l ≤ vol.
		Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured
Brand and Model		AEG Electrolux B4101-5-M									
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.70	<0.91	51	47	48.4 to 53.5	Medium	Medium
	Conventional			0.87	0.77	<0.99					
Measured performance:											
This model did not achieve its declared value of usable volume.											
Manufacturer's Response:											
The manufacturer asserts that the model meets the standard requirements for Usable Volume as shown in a report from VDE Testing & Certification Institute (an independent accredited laboratory) based upon testing one sample purchased independently.											
Manufacturer's Test Results											
Cavity 1	Forced Air							51		Medium	Medium
	Conventional										
Defra Comments:											
Discussion with the manufacturer and Defra's independent accredited laboratory, revealed that the differences in measurement of cavity size arose from lack of clarity in the standard, allowing for difference in interpretation of how oven depth should be measured. A new version of the standard EN50304/EN60350 is due to come into force at the end of 2009 which defines a precise and unambiguous method of measurement but until the Official Journal of the European Communities is amended to reference this new version, the older version, with its opportunities for interpretation, will remain in use as the required standard for verification of energy labelling performance parameters.											
Manufacturer's Comments											
An independent accredited laboratory test report demonstrates that an independently purchased sample of this model, meets the manufacture's declared usable volume stated on the Energy Label, in correspondence with the current standard EN50304:2001 and EC Directive 2002/40EG. The results obtained by VDE are in line with those obtained by Electrolux's own test laboratories. Any differences between the results obtained by the two different nationally accredited laboratories are due to organisational / professional differences in interpretation of the current standard.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Ignis AKL 906/IX										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.74	<0.91	53	52	50.3 to 55.6	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional										
Measured performance:											
This model achieved all its declared label parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Rangemaster Classic 90 Dual Fuel										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.85	0.80	<0.975	67	70	63.6 to 70.3	Large	Large
	Conventional										
Cavity 2	Forced Air	B	B	0.95	0.93	<1.085	53	53	50.3 to 55.6	Medium	Medium
	Conventional										
Measured performance:											
This model achieved all its declared label parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Indesit K3E1(W)/G										
Market Picture Testing Results:											
Cavity 1	Forced Air	B	C	0.99	1.03	<1.129	58	60	55.1 to 60.9	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional										
Measured performance:											
This model achieved all its declared label parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Zanussi Electrolux ZKC6020W										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.75	<0.909	58	58	55.1 to 60.9	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional	A	A	0.79	0.74	<0.909	37	39	35.1 to 38.8	Medium	Medium
Measured performance:											
This model did not achieve its declared value of usable volume for one of its cavities.											
Manufacturer's Response:											
The manufacturer asserts that the model meets the requirements for Usable Volume as stated in standard EN50304:2001 and EC Directive 2002/40EG.											
Defra's Comments:											
Discussion with the manufacturer and Defra's independent accredited test laboratory, revealed that the differences in measurement of cavity size arose from lack of clarity in the standard, allowing for difference in interpretation of how oven depth should be measured. A new version of the standard EN50304/EN60350 is due to come into force at the end of 2009 which defines a precise and unambiguous method of measurement but until the Official Journal of the European Communities is amended to reference this new version, the older version, with its opportunities for interpretation, will remain in use as the required standard for verification of energy labelling performance parameters.											
Manufacturer's Comments											
Discussions between the manufacturer and Defra's appointed test laboratory identified that perceived differences in measured useable volume were due to differing interpretations of internal measurement positions in the current standard. The manufacturer's measurements and tests are based upon the interpretation of the standard provided by the German accredited test and certification laboratory VDE. This interpretation is supported by other European nationally accredited, domestic appliance test and certification institutes.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size	
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l
									Medium	35 l ≤ vol. < 65 l
									Large	65 l ≤ vol.
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured
Brand and Model	Belling 358 An 00799									
Market Picture Testing Results:										
Cavity 1	Forced Air									
	Conventional	C	B	1.1	0.81	<1.25	54	58	51.3 to 56.7	Medium
Cavity 2	Forced Air									
	Conventional	C	C	0.99	0.86	<1.129	28	28	26.6 to 29.4	Small
Measured performance:										
This model achieved all its declared label parameters.										

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Hotpoint SY56X/1										
Market Picture Testing Results:											
Cavity 1	Forced Air	B	A	0.98	0.77	<1.118	56	53	53.2 to 58.8	Medium	Medium
	Conventional			1.08	0.85	<1.228					
Measured performance:											
This model did not achieve its declared value of usable volume.											
Manufacturer's Response:											
The manufacturer challenged the results.											
Manufacturer's Test Results											
Cavity 1	Forced Air							56			
	Conventional										
Defra's Comments:											
Discussion with the manufacturer and Defra's independent accredited test laboratory, revealed that the differences in measurement of cavity size arose from lack of clarity in the standard, allowing for difference in interpretation of how oven depth should be measured. A new version of the standard EN50304/EN60350 is due to come into force at the end of 2009 which defines a precise and unambiguous method of measurement but until the Official Journal of the European Communities is amended to reference this new version, the older version, with its opportunities for interpretation, will remain in use as the required standard for verification of energy labelling performance parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Belling XOU70FP Mk II										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.76	<0.909	50	42	47.5 to 52.5	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional	B	B	0.79	0.76	<0.909	31	32	29.4 to 32.5	Small	Small
Measured performance:											
This model did not achieve its declared value of usable volume.											
Manufacturer's Response:											
None.											

Label Parameter		Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size	
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)				Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l
										Medium	35 l ≤ vol. < 65 l
										Large	65 l ≤ vol.
		Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured
Brand and Model		Cannon Cucina C60EKW									
Market Picture Testing Results:											
Cavity 1	Forced Air	B	C	1.19	1.12	<1.349	65	61	61.7 to 68.3	Large	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional	B	C	0.99	0.85	<1.129	35	34	33.2 to 36.7	Medium	Small
Measured performance:											
This model did not achieve its declared usable volume value for cavity 1 and as a result its size category is considered medium. This in turn means that the declared energy efficiency class is not considered to have been achieved.											
Manufacturer's Response:											
The manufacturer (Indesit) challenged the results and supplied results of tests carried out by an independent laboratory.											
Manufacturer's Test Results											
Cavity 1	Forced Air							68			Large
	Conventional										
Cavity 2	Forced Air										
	Conventional							36			Medium
Defra Comments:											
Discussion with the manufacturer and Defra's independent accredited test laboratory, revealed that the differences in measurement of cavity size arose from lack of clarity in the standard, allowing for difference in interpretation of how oven depth should be measured. A new version of the standard EN50304/EN60350 is due to come into force at the end of 2009 which defines a precise and unambiguous method of measurement but until the Official Journal of the European Communities is amended to reference this new version, the older version, with its opportunities for interpretation, will remain in use as the required standard for verification of energy labelling performance parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Bosch HBN131521B										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.79	<0.909	58	58	55.1 to 60.9	Medium	Medium
	Conventional										
Measured performance:											
This model achieved all its declared label parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Stoves 1000DF Black										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	B	0.77	0.86	<0.887	47	42	44.6 to 49.3	Medium	Medium
	Conventional			0.85	0.76	<0.975					
Cavity 2	Forced Air	A	B	0.77	0.81	<0.887	52	45	49.4 to 54.6	Medium	Medium
	Conventional										
Measured performance:											
This model did not achieve the declared value of usable volume for either of its two cavities.											
Manufacturer's Response:											
None.											

Label Parameter	Energy Efficiency Class	Energy Consumption in kWh			Usable Volume (L)			Size			
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)		Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l		
								Medium	35 l ≤ vol. < 65 l		
								Large	65 l ≤ vol.		
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Hotpoint Creda C367EWH										
Market Picture Testing Results:											
Cavity 1	Forced Air	B	B	1.19	1.06	<1.349	65	62	61.7 to 68.2	Large	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional	B	B	0.98	0.81	<1.118	35	37	33.2 to 36.7	Medium	Medium
Measured performance:											
This model did not achieve its declared usable volume value.											
Manufacturer's Response:											
The manufacturer (Indesit) challenged the results and supplied results of tests carried out at an independent laboratory.											
Manufacturer's Test Results											
Cavity 1	Forced Air							68			Large
	Conventional										
Cavity 2	Forced Air										
	Conventional							36			Medium
Defra's Comments:											
Discussion with the manufacturer and Defra's independent accredited test laboratory, revealed that the differences in measurement of cavity size arose from lack of clarity in the standard, allowing for difference in interpretation of how oven depth should be measured. A new version of the standard EN50304/EN60350 is due to come into force at the end of 2009 which defines a precise and unambiguous method of measurement but until the Official Journal of the European Communities is amended to reference this new version, the older version, with its opportunities for interpretation, will remain in use as the required standard for verification of energy labelling performance parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Whirlpool AKP 201/IX										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	B	0.91	0.81	<1.041	53	53	50.3 to 55.6	Medium	Medium
	Conventional			0.79	0.84	<0.909					
Measured performance:											
This model achieved all its declared label parameters.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Beko D532 S										
Market Picture Testing Results:											
Cavity 1	Forced Air										
	Conventional		B	A	0.9	0.76	<1.03	54	55	51.3 to 56.7	Medium
Measured performance:											
This model achieved all its declared label parameters.											

Label Parameter		Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size	
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)				Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l
										Medium	35 l ≤ vol. < 65 l
										Large	65 l ≤ vol.
		Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured
Brand and Model		Electrolux EOB 53000K Black									
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.72	<0.909	51	46	48.4 to 53.5	Medium	Medium
	Conventional			0.9	N/A*						
Measured performance:											
<p>This model did not achieve its declared usable volume value.</p> <p>*In addition it declared a value of energy consumption for a conventional heating function but this function was not found on the sample model tested.</p>											
Manufacturer's Response:											
<p>The manufacturer asserts that the model meets the standard requirements for Usable Volume as shown by a report from VDE Testing & Certification Institute (an independent accredited laboratory) based upon one sample purchased independently.</p> <p>*A conventional Energy Consumption declaration figure was made in error for this model. The Energy Labelling information for this model was amended in May 2009.</p>											
Manufacturer's Test Results											
Cavity 1	Forced Air							51		Medium	Medium
	Conventional										
Defra's Comments:											
<p>Discussion with the manufacturer and Defra's independent accredited test laboratory, revealed that the differences in measurement of cavity size arose from lack of clarity in the standard, allowing for difference in interpretation of how oven depth should be measured. A new version of the standard EN50304/EN60350 is due to come into force at the end of 2009 which defines a precise and unambiguous method of measurement but until the Official Journal of the European Communities is amended to reference this new version, the older version, with its opportunities for interpretation, will remain in use as the required standard for verification of energy labelling performance parameters.</p>											
Manufacturer's Comments											
<p>An independent accredited laboratory test report demonstrates that an independently purchased sample of this model, meets the manufacture's declared usable volume stated on the Energy Label, in correspondence with the current standard EN50304:2001 and EC Directive 2002/40EG.</p> <p>The results obtained by VDE are in line with those obtained by Electrolux's own test laboratories.</p> <p>Any differences between the results obtained by the two different nationally accredited laboratories are due to organisational / professional differences in interpretation of the current standard.</p>											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	New World NW60F 444447283										
Market Picture Testing Results:											
Cavity 1	Forced Air	B	B	0.99	0.87	<1.129	54	47	51.3 to 56.7	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional										
Measured performance:											
This model did not achieve its declared usable volume value.											
Manufacturer's Response:											
None.											

Label Parameter	Energy Efficiency Class		Energy Consumption in kWh			Usable Volume (L)			Size		
Maximum Variance Allowed from Declared Value in accordance with standard (EN 50304:2001 Incorporating Corrigendum No.1.)			Measured value < value declared by the manufacturer plus 10% plus 0.040 kWh.			Measured value = value declared by the manufacturer +/- 5%.			Small	12 l ≤ vol. < 35 l	
									Medium	35 l ≤ vol. < 65 l	
									Large	65 l ≤ vol.	
	Declared	Measured	Declared	Measured	Value Allowed	Declared	Measured	Value Allowed	Declared	Measured	
Brand and Model	Tricity Bendix SE500/1X										
Market Picture Testing Results:											
Cavity 1	Forced Air	A	A	0.79	0.72	<0.909	58	59	55.1 to 60.9	Medium	Medium
	Conventional										
Cavity 2	Forced Air										
	Conventional	A	A	0.79	0.69	<0.909	37	38	35.1 to 38.8	Medium	Medium
Measured performance:											
This model achieved all its declared label parameters.											