



**Report on useful observations related to the pertinence
of Ecodesign and Energy Labelling requirements and
official measurement standards**

WP5, Deliverable D5.2

2016

Authors:

Ayse Sumer, ANEC, European Consumer Organisation in Standardisation

**Alun Jones, ECOS, European Environmental Citizen's Organisation for
Standardisation**

Nicole Bernefeld, International Consumer Research & Testing

Stewart Muir, Energy Saving Trust

**Project coordinated by
Energy Saving Trust, United Kingdom**

**Supported by
Intelligent Energy Europe**

Contact:

Ayse Sumer, ANEC, European Consumer Organisation in Standardisation

(ayse.sumer@anec.eu)

**Alun Jones, ECOS, European Environmental Citizen's Organisation for
Standardisation**

Alun.Jones@ecostandard.org

Katie Hoy, Energy Saving Trust, United Kingdom

Katie.Hoy@est.org.uk

www.market-watch.eu

The sole responsibility for the content of this Deliverable lies with the authors. It does not necessarily reflect the opinion of the European Union. Neither the EASME nor the European Commission are responsible for any use that may be made of the information contained therein.



Co-funded by the Intelligent Energy Europe
Programme of the European Union

Contents

1. INTRODUCTION	3
1.1 Background	3
1.2 MarketWatch project	3
1.3 Purpose of this document	3
1.4 Scope	3
2. ECODESIGN AND ENERGY LABELLING REQUIREMENTS	3
3. HARMONISED STANDARDS	4
4. OFFICIAL TEST PARAMETERS OF ENERGY USING PRODUCTS	5
5. METHODS/TESTS USED BY CONSUMER ORGANISATIONS	5
6. MARKETWATCH TESTS OBSERVATIONS	7
7. OBSERVATIONS ON DIFFERENT APPROACHES	13
8. CONCLUSIONS/RECOMMENDATIONS	13

1. Introduction

1.1 Background

Insufficient market surveillance is one of the main obstacles to the full realisation of the energy saving potential of the EU Ecodesign¹ and Energy Labelling² Directives. It is estimated that 10% to 20% of the expected savings can be wasted due to non-compliant products on the market. This translates into more than 100TWh of annual final energy savings that could be missed in the EU (as much as the current residential electricity consumption of Eastern Europe).

1.2 MarketWatch project

The MarketWatch project aims at increasing the involvement of civil society in market surveillance activities related to Ecodesign and Energy Labelling, with the ultimate goal to increase the level of compliance in the EU.

This project brings together a large consortium of environmental, consumer and energy non-profit organisations in several key countries representing 80% of the EU final energy consumption.

1.3 Purpose of this document

The purpose of this document is to provide interesting findings on the pertinence and relevance for consumers of Ecodesign and Energy Labelling parameters and official measurement methods.

1.4 Scope

One of the activities under this project has been to identify and mobilise hard testing capacities from consumer and civil society organisations to establish a database of suspicious cases of non-compliance from analysis of consumer NGO and independent testing campaigns. With that aim, analysis of test campaigns from civil society organisations and independent testing campaigns have been carried out to draw useful findings on compliance with Ecodesign and Energy labelling Directives.

2. Ecodesign and Energy labelling requirements

The Ecodesign and Energy Labelling requirements are defined under the following two Framework Directives:

- Directive 2009/125/EC of the European Parliament and of the Council of 21 October 2009 establishing a framework for the setting of ecodesign requirements for energy-related products (OJ L 285, 31 October 2009)

¹Directive 2009/125/EU

²Directive 2010/30/EU

- Directive 2010/30/EU of the European Parliament and of the Council of 19 May 2010 on the indication by labelling and standard product information of the consumption of energy and other resources by energy-related products (OJ L 153, 18 June 2010)

The Ecodesign Directive sets a framework for performance criteria which manufacturers must meet in order to legally bring their product to the market. It does not yet, however, prescribe specific measures or standards and sets no overall energy saving targets.

The Energy Labelling Directive complements those Ecodesign requirements with mandatory labelling requirements aiming at providing consumers with energy and environmental information on which they can base a choice between products on the market.

The Ecodesign Directive does not create any binding requirements on products by themselves, but product-specific ecodesign measures (mandatory product requirements) are set through specific Commission Regulations or 'Implementing Measures' for each product group, while the Energy labelling Directive 2010/30/EU is supplemented by 'supplementing measures" which are delegated regulations.

Reference to Implementing measures and harmonised standards which have been published in the Official Journal can be found at the following link:

http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/ecodesign/index_en.htm

3. Harmonised standards

For the proper functioning of the internal market it is essential to have standards which have been harmonised at Community level. Once the reference to such a standard has been published in the Official Journal of the European Union, compliance with it should raise a presumption of conformity with the corresponding requirements set out in the implementing measure adopted on the basis of the 2009/125/EC Directive, although other means of demonstrating such conformity should be permitted. One of the main roles of harmonised standards should be to help manufacturers in applying the implementing measures adopted under this Directive. Such standards could be essential in establishing measuring and testing methods. In the case of generic ecodesign requirements, harmonised standards could contribute considerably to guiding manufacturers in establishing the ecological profile of their products in accordance with the requirements of the applicable implementing measure. These standards should clearly indicate the relationship between their clauses and the requirements dealt with. The purpose of harmonised standards should not be to fix limits for environmental aspects.

Before placing a product covered by implementing measures on the market and/or putting such a product into service, the manufacturer or its authorised representative shall ensure that an assessment of the product's conformity with

all the relevant requirements of the applicable implementing measure is carried out.

4. Official test parameters of energy using products

The test parameters for measurements are provided in the Annexes of the respective Regulations³ for each product as well as in the respective technical standards, including detailed specifications for testing. The declared values are the values indicated by the manufacturers for the purpose of showing compliance to Ecodesign regulations.

5. Methods/tests used by consumer organisations

A survey⁴ among consumer organisations has revealed that there is clear tendency to use alternative testing approaches from official standards and measurements. The reason behind this is to be able to respond to actual consumer requirements, i.e. product safety, usability and energy consumption. Furthermore, consumer organisations select tests and requirements closer to the consumer's way of using the products than what is given in the labelling standard in order to find out about the products performance in real life conditions. The consumer organisations' objective is to test the products under real use conditions than by using the standards that they are optimized against by the manufacturer.

The energy label can sometimes be an issue in a rather negative context (e.g.: the temperature of the programs applied on the energy label, abuse of tolerance, test not according to real life use of the product etc.)

Some examples of consumer testing versa manufacturer declarations:

- Televisions: the manufacturer carries out the power consumption testing in the factory settings of the TVs. Requirements to the picture quality is not defined in the label regulation; thus, to reduce electricity consumption manufacturers reduce the brightness of the image. When consumer organisations test the TVs the factory default settings of the screen, which are often dark and not very suitable for everyday use are changed to reflect the real way of use by the consumer. Only when the contrast, brightness and colour are optimal they measure the power consumption, which is often significantly higher than the details of the energy label. Additionally the power consumption in factory settings is measured and compared to the measurements with the optimum viewing settings.
- Vacuum cleaners: Manufacturers tests are carried out with empty bags and with full speed ahead when the cleaning effect is tested for label. Some devices suction power is so strong that they are almost impossible

³Links available on http://ec.europa.eu/growth/single-market/european-standards/harmonised-standards/ecodesign/index_en.htm

⁴ Survey replies from 12 consumer organisations in EU Member States

to manoeuvre. The result is high suction force which is however less practical. Also the testing is conducted with an empty dust bag, while in real life this is not the case, it is used until the bag is filled up completely. Consumer organisations check the cleaning effect with full bag and reduced power. The motive is that the user should be able manoeuvre the device better. They also test not only with empty dust bag, but also with filled - the suction force decreases the more dust bags are filled up. From the various test scenarios, they determine an overall result. They vacuum on all surfaces with the same universal nozzle since in real life consumers do not exchange the nozzle when they switch from carpet to hard floor. All vacuum cleaners are used on the same carpet for the consumer tests.

Washing machines: the manufacturer's tests determine the electricity and water consumption only in the energy saving programmes at 40 degrees and 60 degrees. As to have the best energy efficiency rating, the manufacturer decreases the temperature and lets the machine wash for longer which can be up to three to four hours for the ECO programme. The consumer's way of using the washing machine can be different (e.g. choosing quick-wash programmes), which can increase water and energy consumption. Therefore the consumer organisations are testing the amount of energy and water consumption of each machine during the normal washing programs and the ECO programme as to be able to inform the consumer which machines will cost a lot to run, and which will be cheaper. In addition the washing machines are not loaded to its maximum capacity and the tests are performed at 40 degrees instead of 60 degrees.

Comparative consumer testing has the purpose to inform the reader about the advantages and disadvantages of products and will often rank them from best to worst in class but it is also possible to give, based on the same tests, different rankings for different types of users.

Some consumer organisations use specific classifications for the products, which are as follows:

- The best of the test – product(s) with the best overall performance;
- The best buy(s) – product(s) with the best quality/price ratio;
- The profitable choice – product(s) that have an acceptable quality but are sold at a very interesting price;
- Not recommendable – product(s) below a certain quality level;
- Unsafe – product that don't sustain safety tests

Due to the nature of comparative testing and its purpose, available standards will often neither be sufficient nor adequate to compare all aspects of product quality. Often standards set minimum requirements (and are efficient for that purpose) but lack additional aspects of performance, convenience and user friendliness. In these cases, the application of different and advanced methodologies is advised. Comparative testing will generally try to assess the quality of a product in addition to it fulfilling a standard, or might look at one or more specific user requirements.

6. MarketWatch tests observations

A wide range of testing was conducted under the MarketWatch project. Full compliance tests against official measurement methods were carried out on 27 products. In addition, 100 products were 'check tested' against methods developed by the consortium in consultation with independent experts and laboratories.

Products tested covered appliances, consumer electronics products such as TVs and set top boxes, lighting, and an extensive list of products tested for standby power consumption including products as diverse as hair driers, toasters, routers, microwaves and digital radios.

MarketWatch developed 10 check test methods to screen products before deciding to proceed with full tests. In all cases, the check test methods developed were based on the official measurement standards; this was deliberate and necessary to give insights into how products would perform in the official tests. However, both the check testing and full testing gave useful insights into the pertinence of individual tests related to Ecodesign and Energy Labelling.

Effectiveness of the check testing approach

The project team emphasised throughout that check tests were unofficial and would not give rise to any formal designation of compliance status. Check test and full test results were often found to be similar; for the 23 products which were tested in both stages, check results were corroborated by the full tests for 20 of these products (including products that were deemed to have passed tests). Check tests often carried out fewer test runs, or power measurements lasting for a shorter period of time than in full tests.

However, despite check testing giving useful insights, MarketWatch emphasises the importance of carrying out robust full tests in accredited laboratories to ensure results are sound, especially when used for reporting purposes.

Observations from different test parameters

Rates at which products met claims in different tests varied significantly; for example:

- All measurements of cleaning and drying efficiency made on dishwashers were seen to be lower than claims in both in unofficial check tests and full tests
- 6 out of 7 measurements of energy rating of refrigerators were lower than claims in check tests
- Of the 44 products check tested for standby, off-mode, or network standby (or combinations thereof), 10 products were suspected of not meeting at least one applied limit; 4 of these were digital radios (from a total of 7 digital radios check tested)

However, results from other tests showed very little deviation from claims:

- Measurements of EEI and water consumption for washing machines showed very little deviation from claims
- 18 products were check-tested by the project in off-mode that had no electronic display. This included toasters, hairdryers, kettles, coffee machines, non-networked soundbars and electric toothbrushes. 16 of these were measured below the limit of 0.5W, suggesting likely high compliance and that measurement methods are appropriate for the current standby Ecodesign Regulation
- All 6 of the set-top boxes check-tested were measured below the limits for on-mode and standby power
- No evidence of a “defeat device” was seen in any of the check test or full tests.

Pertinence of different test parameters

Dishwashers; cleaning efficiency

In dishwasher testing, measurements were as follows:

Check tests

Sample	Energy Rating		Cleaning Efficiency Class		Drying Efficiency	
	Declared	Measured	Declared	Measured (% diff)	Declared	Measured (% diff)
1	A+	A+	A	C (11.6%)	A	C (26.8%)
2	A++	A++	A	B (8.0%)	A	B (18.5%)
3	A+	A	A	B (4.5%)	A	B (11.1%)
4	A++	A++	A	B (4.5%)	A	B (1.9%)
5	A+	A+	A	B (8.0%)	A	B (13.9%)

Full tests

Test	Amica ESP 14386V		Whirlpool ADP2300A		OK ODW 451 FS	
	Declared	Measured	Declared	Measured	Declared	Measured
Energy Rating	A++	A++	A+	A+	A+	A+
Cleaning Efficiency	A	B	A	B	A	C
Drying Efficiency	A	B	A	B	A	C

The results show a trend that in all cases except one, samples tested achieved their claimed energy rating, but in each of the 5 tests, measurements of drying efficiency and cleaning efficiency were below both claimed values and the current minimum ecodesign rating of A. However the cleaning efficiency metric in particular is an important one; the test for this uses a standard load soiled with various food and drink residues and compares the cleaning performance to a cycle on a declared reference machine. In real life usage, an inferior cleaning efficiency means a dishwasher may have to be put on again, or a higher temperature programme that consumes more energy may have to be used rather than the standard program or ‘Eco’ setting which is used for energy label rating calculations.

Yet the overall energy rating is the most prevalent metric for consumers selecting a product; the cleaning efficiency class or index is not included on the dishwasher energy label or even required to be detailed in the product fiche.

This is not the first time the issue of cleaning efficiency performance of dishwashers has been raised. CECED commissioned a 2003 study⁵ looking at the reproducibility of results for cleaning efficiency (and other dishwasher test metrics), comparing results from 19 European laboratories, including institutes and manufacturer laboratories. SLG, the 17025 accredited laboratory used by MarketWatch for this testing, was one of the 19 participants. Some variation in measurements of cleaning and drying efficiency was seen. The report showed a number of interesting trends on reproducibility of results between laboratories in what is considered a complex test.

It is extremely important that this metric is able to be measured with a sufficiently high level of reproducibility and that the tests producing data for manufacturers' declarations of cleaning efficiency are carried out correctly. In SLG, MarketWatch selected a highly experienced laboratory following a stringent selection process to carry out its testing, but the CECED study also shows that there also may be significant variability between different laboratories' measurements.

Lighting; energy rating and useful luminous flux

MarketWatch's testing of lamps showed a number of cases where measurements of useful luminous flux were lower than claims (in some cases significantly so), but the energy rating calculated was unaffected. Some of the instances observed enable the argument to be made for reducing the size of certain energy bands. Examples seen were as follows:

Check tests (5 samples per product measured)

Sample	Energy rating		Lumen output			Wattage		
	Declared	Measured	Declared	Measured	Difference	Declared	Measured	Difference
1	A	A	360	319	11% lower	7.0W	7.5W	7% higher
2	A+	A+	470	296	37% lower	5.0W	4.6W	8% lower
3	A	A+	420	449	7% higher	7.0W	6.7W	4% lower
4	A+	A++	480	436	9% lower	4.0W	3.9W	3% lower
5	A+	A	345	269	22% lower	6.0W	5.7W	5% lower
6	A+	A+	1055	910	14% lower	12.0W	10.6W	12% lower
7	D	D	1200	1096	9% lower	70.0W	73.0W	4% higher
8	A+	A+	600	734	22% higher	8.0W	7.5W	6% lower
9	C	D	630	588	7% lower	42.0W	44.1W	5% higher

Full tests (20 samples per product measured)

Sample	Energy rating		Lumen output			Wattage		
	Declared	Measured	Declared	Measured	Difference	Declared	Measured	Difference
1	A	A	345	277	20% lower	6.0W	5.8W	3% lower
2	A+	A+	360	308	15% lower	7.0W	7.1W	1% higher
3	A	A+	1050	871	17% lower	12.0W	11.9W	0.8% lower
4	A+	A++	1055	973	8% lower	12.0W	10.2W	15% lower

⁵ <https://www.landtechnik.uni-bonn.de/forschung/haushaltstechnik/publikationen/ringtest-ht2.pdf>

One of the most interesting examples seen was sample 2 in the check testing. Despite useful luminous flux measuring 37% lower than the claim, this was still not enough to take it out of the A+ band. Wattage was measured at 4.6W against a claim of 5.0W; the lower measured wattage therefore resulted in a better EEI than if the wattage had been as claimed. Interestingly for this lamp, this did not make a difference to the measured class in this case; calculating the EEI for this lumen value and a 5.0W power would give an EEI of <0.17 and still place this lamp in the A+ band, despite the significant difference between the declared and measured lumens.

However, the regulation does state that even if a lamp measures in the correct band, the values of the batch must not differ from the claim by more than 10% (including useful luminous flux values), but this case does highlight issues that arise when a higher wattage is claimed than is measured, improving the EEI value in tests and potentially enabling achievement of a particular band despite lower lumen values.

The 10% deviation limit on average batch values should in theory apply to lower measurements of wattage. Whilst this does result in lower energy use, and may appear a lower priority for enforcement, it may also give rise to a lower incandescent equivalence than is claimed, meaning a consumer does not quite get the bulb replacement they think they are getting.

Updating of Software

Some digital radios did not meet limits for standby power in the testing. One manufacturer, Roberts Radio, reported that they could make an “over the airwaves” update that would “correct a bug where the audio amplifier failed to shut down in low power standby mode”. However if such an update is able to reduce the power consumption, it bears asking whether another update that improves functionality could increase power consumption of products once they are in the home.

The guidance notes on the horizontal standby regulation 1275/2008 confirm that “The Regulation does not mention software upgrades”. This is an aspect that is worthy of consideration to ensure that standby power savings made from the legislation are not potentially lost from a remote software update that takes place after a product is originally tested.

Interpretation of Regulations

Interesting observations were seen regarding interpretations of the regulations. On occasion these differed between manufacturers and the MarketWatch consortium. In some of these cases, manufacturers presented test data from independent accredited laboratories to justify their position. Examples included:

- The determination of exactly which state was the true standby mode for power measurements differed for some digital radios. MarketWatch took the factory setting as the mode for this, as is specified in DIN EN 50564:2011 point 5.2, whereas one digital radio manufacturer reported

that a user-setting that was not the factory setting was defined as the mode in the testing for their CE declaration, which was from a third party.

- There were differences in opinion on whether a product was a “networked product” and can apply networked limits of 6.0W, rather than a non-networked limit of 1.0W in standby mode. For example, a Wi-Fi enabled kettle tested by MarketWatch was not able to have its network deactivated, and drew 0.87W in a mode considered to be ‘off-mode’ by MarketWatch’s contract test laboratory. From the justification provided by the manufacturer, the kettle was considered to fall within the scope of a networked product. However, at this point the product was not receiving data, had no indication light activated, nor was it performing any function. If considered a non-networked product in off-mode, this would exceed the limit of 0.5W.

Tolerance limits

In the ‘verification procedure’ annexes of product specific delegated regulations, tolerance limits are defined; measured parameters for products must fall within these when market surveillance authorities carry out their testing. It is important that there is leeway allowed for variation of products within a batch. However, this tolerance may only be invoked when a market surveillance authority carries out testing, and a product may still be considered compliant with its declaration if the measured parameter falls within the tolerance. Delegated regulations are specific that tolerance bands are for this purpose only and may not be used for manufacturers to declare better performance to achieve compliance or to place it in a higher band.

However, it is reported by market surveillance authorities that tolerances have been used by manufacturers in this way. Commission working documents addressing this issue have been recently released in the form of a draft regulation that will amend the relevant product specific regulations to more formally deal with this issue, by ensuring that values in technical documentation held are not more favourable than those declared on the label or the product fiche. This seeks to close what is described as an “unintended loophole”.

MarketWatch did look at instances where products were measured in lower classes than declared or were below limits, but were within tolerance bands; with a data set covering over 120 products, this allows for useful observations of how widespread this issue may be, and in what capacity.

Check testing observations

Again, it is emphasised that MarketWatch’s check testing is non-official and that the sample selection was targeted and is therefore not representative of the entire market. Despite this, results from check testing may give a more interesting picture of the frequency by which products measured in tolerance bands than the 27 full tests; for full tests it was already known that there was likely to be a product specific issue. Results seen for the 100 products check tested can be summarised as follows:

Products that were measured to fully meet their declarations or limits	57
Products that did not fully meet declarations or limits but were within allowed tolerance limits	17
Products which measured outside tolerance limits in check testing	26

Energy rating

Product type	No. check tests	Energy rating met	Energy rating lower but within tolerance	Energy rating lower and outside tolerance
Washing Machines	4	3	1	0
Tumble Driers	6	4	2	0
TVs	5	3	0	2
Lighting	9	7	1	1
Ovens*	8	5	3	0
Refrigeration	7	1	3	3
Dishwashers	5	4	1	0
Vacuum Cleaners	7	4	1	2
Total	53	31	12	8

*7 ovens were check tested, but one had two cavities.

Other parameters check tested

Test	No. check tests	Measured to meet limit or declared band	Measured outside limit or declared band but within inside tolerance	Measured outside limit or declared band and outside tolerance
Standby power (non-energy labelled products, TVs, set-top boxes)	31	24	2	5
Off-mode power	22	20	0	2
Networked Standby	8	6	0	2
Auto Power Down (TVs, set-top boxes)	11	9	0	2
Peak luminance ratio (TVs)	5	5	0	0
Spin efficiency (washing machines)	4	4	0	0
Condensation efficiency (tumble driers)	4	2	1	1
Cleaning efficiency (dishwashers)	5	0	4	1
Drying efficiency (dishwashers)	5	0	4	1
Carpet cleaning efficiency (vacuum cleaners)	7	3	1	3
Hard floor cleaning efficiency (vacuum cleaners)	7	4	1	2
Useful luminous flux (lamps)	9	2	3	4
Annual water consumption (Washing machines, dishwashers)	9	7	1	1

Therefore, refrigeration and ovens were the two groups which most often measured lower classes, but within tolerance limits for their energy rating in

MarketWatch's check testing. Measured parameters that were most regularly seen to be within tolerance limits were cleaning efficiency, drying efficiency and useful luminous flux. MarketWatch fully supports the intention to make this issue more formal in regulations and ensure that declarations are as accurate and transparent as possible.

7. Observations on different approaches

In order to assess compliance with the regulations, and issue labels under the Energy Labelling regulations, product manufacturers must perform tests on their products to determine what energy performance they will declare. Every measurement value deriving from these tests is subject to a level of uncertainty, due to uncontrollable factors (limitations of the test methodology, environmental factors in laboratories, equipment, etc.). Similarly, as part of the verification process set in the aforementioned regulations, Member State authorities test products put on the market to verify the declared compliance. For the purposes of this procedure, the regulations set a level of tolerance, a sort of "allowance" on the values obtained by tests. It has been acknowledged that some manufacturers use tolerances to achieve higher energy labelling classes or to meet the Ecodesign requirements by adding the value of tolerances on top of the measured values. Tolerances should under no circumstances be used by the manufacturer as a means to achieve a more efficient energy class, but only by Member State authorities to allow for a fair verification of declared values of products. This should be explicitly stressed in the European Commission guidance.

The consumer organisations' test programmes reveal the abuse of tolerances which is publicised in the magazines as to improve the existing instruments. The abuses were often referred to criticize the energy label. Therefore, in order not to lose consumer trust in the label, it is of primary importance that authorities prevent an abuse of tolerances by manufacturers.

8. Conclusions/recommendations

Revision of Energy labelling regulation-gaining consumer trust

In order to prevent that consumers lose confidence in the energy label it is important that energy consumption and other information concerning the products covered by product-specific requirements under the Directive 2010/30/EU should be measured in accordance with harmonized standards and methods and by using reliable, accurate and reproducible methods that take into account the generally recognised state-of-the-art measurements and calculation methods. These methods should be as close as possible to real life conditions in order for consumers to be able to relate and trust the information conveyed by the labels. They should also be clear and robust in order to deter intentional and unintentional circumvention. It is in the interests of the functioning of the internal market to have standards which have been harmonised at Union level. In the absence of published standards at the time of application of product-specific requirements the Commission should publish in the Official Journal of the European Union transitional measurement and calculation methods in relation to those product-specific requirements. Once a reference to such a standard has been published in the Official Journal of the European Union compliance with it

should provide a presumption of conformity with measurement methods for those product-specific requirements adopted on the basis of this Regulation.

Lack of transparency on the testing methods and testing conditions

- Ovens: For the calculation of the Energy Class the volume and the the energy consumption at 3 different temperature settings with the so called "brick test" need to be measured in order to calculate the EEI and the the correct energy class. However the regulation does not specify how the volume should be measured, ie with side racks or without side racks which can make a difference when calculating the correct EEI class. For instance if the volume of an oven is measured without the side racks the EEI will be generally lower and better for the manufacturer.

For efficient implementation, consumers need to be ensured that the products found on the EU market comply with the legislative requirements. Reliable testing laboratories are important for efficient market surveillance of energy-related products.

In order to raise awareness and knowledge under the MarketWatch project, Guidelines on the most simple Ecodesign & Energy Labelling requirements and main test standards and conditions for complex Ecodesign and energy labelling requirements were developed and shared with NGOs and also published on the MarketWatch website. This report identifies the current and potential future energy using and energy related products that fall under the Ecodesign and/or Energy Labelling Regulations of the European Union, European Economic Area, and European Free Trade Agreement areas. Further, this report attempts to establish an introduction to these regulations with a specific view to assist in the identification of non-compliance. Framed especially for Civil Society Organisations (CSOs), it shall serve as a guide to simple steps that can be taken by individuals or organisations to identify manufacturers and retailers who do not adhere to the two regulations. Additionally, the report outlines the complex requirements and numerous associated test standards used to implement individual regulations. It is these test standards that serve as the framework for full compliance testing. The report covers all measures that are in force at the time of publication (2013).

More severe sanctions for non-compliance to deter free riders

The current sanctions for non-compliance differ from one Member State to another, while they can be very low in one, they can be very high in other. There is need for deterrent sanctions in all Member States.

Prevention of possible cheating

The use of 'defeat devices' and software to cheat must be explicitly forbidden under the new energy labelling regulation. The Volkswagengate scandal has been detrimental to the emission test procedures and also to standards since they allowed for breaking the rules. The Volkswagen group admitted using "defeat

software" in their cars, which was able to recognize that a car was being tested for compliance with air pollution standards and which switched the car into a cleaner mode during the laboratory test than when being used on the road. It might be possible that also electric appliances contain software which can recognize if the device is being tested and therefore switches to an energy-saving mode only for the time of testing. This has to be prevented and sanctioned severely.

Creation of central testing facilities in the EU

It is under the responsibility of national market surveillance authorities to carry out market surveillance and testing as required under REGULATION (EC) No 765/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 July 2008 setting out the requirements for accreditation and market surveillance relating to the marketing of products and repealing Regulation (EEC) No 339/93. As found by the Ecofys report⁶ of 2014, which evaluated the Energy Labelling Directive and aspects of the Ecodesign Directive, public market surveillance cannot alone ensure an effective check on compliance. Five Member States were considered active in such market surveillance, six had no activity, while the level of activity in the rest was found to be no better than low to medium.

Furthermore, the summary⁷ of Member States' assessment and review of the functioning of market surveillance activities according to Article 18(6) of Regulation (EC) No 765/2008 published in February 2016 also reveals that market surveillance actions are divergent in the Member States. There seems to be clear need for improving market surveillance of the energy label to achieve a more compelling climate of compliance in all EU Member States.

The ongoing revision of the EU Energy Label might provide the opportunity to strengthen market surveillance. In particular, the creation of a product database with interfaces addressing consumer, regulatory and market surveillance needs will help improve the current shortfall. Furthermore, with respect to testing, market surveillance authorities in half of the Member States do not have product testing activities. The creation of central testing facilities in the EU may help to overcome this problem.

⁶https://ec.europa.eu/energy/sites/ener/files/documents/ECOFYS%202014%20Subsidies%20and%20costs%20of%20EU%20energy_11_Nov.pdf

⁷<http://ec.europa.eu/DocsRoom/documents/15241/attachments/1/translations/en/renditions/native>