Summary: Intervention & Options

Department /Agency:	Title:	
Defra	**Impact Assessment of the compliance & enforcement regime of the Energy-Using Products (EuP) & Energy Labelling Dir.**	
Stage: Consultation	**Version:** 0.6	**Date:** 15 May 2009
Related Publications: Consultation Document		

Available to view or download at:

http://www.defra.gov.uk/corporate/consult/eup-labelling/

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What is the problem under consideration? Why is government intervention necessary?

The Eco Design of Energy using Products (EuP) and Energy Labelling Framework Directives require Member States put in place a Market Surveillance Authority (MSA) to ensure that products placed on the market comply with the requirements of their implementing measures. Currently, this role is fulfilled by Trading Standards Officers and DETI in Northern Ireland (jointly referred to as TSOs for the purposes of this document only). With new measures coming into force for up to 40 new products over 2-3 years this is a timely opportunity to assess the options for compliance and enforcement activity.

What are the policy objectives and the intended effects?

Benefits of implementing a robust compliance and enforcement regime include: a) cost savings in the form of reduced consumer energy bills, CO2 emissions savings and other environmental benefits; b) delivery of the 2007 Energy White Paper commitments on raising product energy efficiency standards and stimulating global competition; c) contribution towards the UK's 80% CO2 reduction targets; and d) creating a level playing field for UK business. Failure to implement an effective compliance and enforcement regime could also result in significant EU fines and reputational damage for the UK.

What policy options have been considered? Please justify any preferred option.

1) to increase the remit of TSOs to be the Market Surveillance Authority (MSA) for all requirements;

2) to give this function to an existing central agency or body; or

3) a hybrid option where TSOs would have responsibility for domestic products, and separate agency would enforce the requirements for non-domestic products.

Our preferred approach is Option 2, using an Executive Agency (such as the National Weights & Measures (NWML) or Vehicle Certification Authority (VCA) who already carry out similar activities), which attracts the highest Net Present Value.

When will the policy be reviewed to establish the actual costs and benefits and the achievement of the desired effects?

The policy will be reviewed 3 years from the date of implementation to reflect 1 year of training and awareness raising, and 2 years of market surveillance and enforcement activity.

Ministerial Sign-off For consultation stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that, given the available evidence, it represents a reasonable view of the likely costs, benefits and impact of the leading options.

Signed by the responsible Minister:

.....Date:

Summary: Analysis & Evidence

Policy Option: MSA Option 1 - TSOs	Description: Extend Trading Standards Officers (TSOs)' remit

COSTS

ANNUAL COSTS	
One-off (Transition)	**Yrs**
£	11
Average Annual Cost (excluding one-off)	
£ 4.6m	

Description and scale of **key monetised costs** by 'main affected groups' Testing, staff & admin costs for preferred regime

Energy related costs inc. CO2 related Heat Replacement Effect

Manufacturing costs of adapting to Implementing Measures

[Range reflecting uncertainty over the testing regime that will be implemented, total costs in range of £27m - £78m]

Total Cost (PV) **£ 62m**

Other **key non-monetised costs** by 'main affected groups'

BENEFITS

ANNUAL BENEFITS	
One-off	**Yrs**
£	11
Average Annual Benefit (excluding one-off)	
£ 8.1m	

Description and scale of **key monetised benefits** by 'main affected groups' Benefits from EuP policies safeguarded due to tighter enforcement, including energy savings to consumers and cost-effective CO2 savings from reduced electricity use.

[Reflecting uncertainty over the testing regime that will be implemented, total benefits in range of £44m - £126m]

Total Benefit (PV) **£ 110m**

Other **key non-monetised benefits** by 'main affected groups' Consumer confidence in the validity of energy-efficiency claims is important for delivering future EuP policies and for wider environmental behaviour change. The creation of a 'level playing field' for manufacturers and retailers also has competition benefits.

Key Assumptions/Sensitivities/Risks Uses rough projections of likely NPV of all EuP policies. Levels of non-compliance (and potential for improvement) based on expert opinion & believed to be cautious, leading to an underestimate of Total Benefits. Assumes effective penalties regime (still to be implemented) and uses a scoring system for MSA options.

Price Base Year	Time Period Years	**Net Benefit Range** (NPV) **£ 17m to £ 48m**	**NET BENEFIT** (NPV Best estimate) **£ 47m**

What is the geographic coverage of the policy/option?			UK	
On what date will the policy be implemented?			6 April 2010	
Which organisation(s) will enforce the policy?			TBD	
What is the total annual cost of enforcement for these organisations?			£ 0.6m - £1.9m	
Does enforcement comply with Hampton principles?			Yes	
Will implementation go beyond minimum EU requirements?			No	
What is the value of the proposed offsetting measure per year?			£	
What is the value of changes in greenhouse gas emissions?			£	
Will the proposal have a significant impact on competition?			No	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices) (Increase - Decrease)

Increase of £ Decrease of £ **Net Impact** **£** negligible

Key: **Annual costs and benefits:** **(Net) Present**

Summary: Analysis & Evidence

Policy Option: MSA Option 2 - Central	Description: (Preferred) To move the enforcement function to an Executive Agency

COSTS

ANNUAL COSTS	
One-off (Transition)	**Yrs**
£	11
Average Annual Cost (excluding one-off)	
£ 12.5m	

Description and scale of **key monetised costs** by 'main affected groups' Testing, staff & admin costs for preferred regime

Energy related costs inc. CO2 related Heat Replacement Effect

Manufacturing costs of adapting to Implementing Measures

[Range reflecting uncertainty over the testing regime that will be implemented, total costs in range of £70m - £202m]

Total Cost (PV) **£ 170m**

Other **key non-monetised costs** by 'main affected groups'

BENEFITS

ANNUAL BENEFITS	
One-off	**Yrs**
£	11
Average Annual Benefit (excluding one-off)	
£ 24.6m	

Description and scale of **key monetised benefits** by 'main affected groups' Benefits from EuP policies safeguarded due to tighter enforcement, including energy savings to consumers and cost-effective CO2 savings from reduced electricity use.

[Reflecting uncertainty over the testing regime that will be implemented, total benefits in range of £134m - £385m]

Total Benefit (PV) **£ 334m**

Other **key non-monetised benefits** by 'main affected groups' Consumer confidence in the validity of energy-efficiency claims is important for delivering future EuP policies and for wider environmental behaviour change. The creation of a 'level playing field' for manufacturers and retailers also has competition benefits.

Key Assumptions/Sensitivities/Risks Uses rough projections of likely NPV of all EuP policies. Levels of non-compliance (and potential for improvement) based on expert opinion & believed to be cautious, leading to a likely underestimate of Total Benefits. Assumes effective penalties regime (still to be implemented) and uses a scoring system for MSA options.

Price Base Year	Time Period Years	**Net Benefit Range** (NPV) **£ 64m to £183m**	**NET BENEFIT** (NPV Best estimate) **£ 164m**

What is the geographic coverage of the policy/option?			UK	
On what date will the policy be implemented?			6 April 2010	
Which organisation(s) will enforce the policy?			TBD	
What is the total annual cost of enforcement for these organisations?			£ 0.6m - £1.9m	
Does enforcement comply with Hampton principles?			Yes	
Will implementation go beyond minimum EU requirements?			No	
What is the value of the proposed offsetting measure per year?			£	
What is the value of changes in greenhouse gas emissions?			£	
Will the proposal have a significant impact on competition?			No	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices) (Increase - Decrease)

Increase of £ Decrease of £ **Net Impact** **£** negligible

Key: **Annual costs and benefits:** **(Net) Present**

Summary: Analysis & Evidence

Policy Option: MSA Option 3 - Hybrid	Description: Hybrid of Options 1 & 2; TSOs take responsibility for domestic products, new Executive Agency for non-domestic

COSTS

ANNUAL COSTS	
One-off (Transition)	**Yrs**
£	11
Average Annual Cost (excluding one-off)	
£ 6.8m	

Description and scale of **key monetised costs** by 'main affected groups' Testing, staff & admin costs for preferred regime

Energy related costs inc. CO2 related Heat Replacement Effect

Manufacturing costs of adapting to Implementing Measures

[Range reflecting uncertainty over the testing regime that will be implemented, total costs in range of £39m - £112m]

Total Cost (PV) **£ 93m**

Other **key non-monetised costs** by 'main affected groups'

BENEFITS

ANNUAL BENEFITS	
One-off	**Yrs**
£	11
Average Annual Benefit (excluding one-off)	
£ 12.7m	

Description and scale of **key monetised benefits** by 'main affected groups' Benefits from EuP policies safeguarded due to tighter enforcement, including energy savings to consumers and cost-effective CO2 savings from reduced electricity use.

[Reflecting uncertainty over the testing regime that will be implemented, total benefits in range of £69m - £198m]

Total Benefit (PV) **£ 172m**

Other **key non-monetised benefits** by 'main affected groups' Consumer confidence in the validity of energy-efficiency claims is important for delivering future EuP policies and for wider environmental behaviour change. The creation of a 'level playing field' for manufacturers and retailers also has competition benefits.

Key Assumptions/Sensitivities/Risks Uses rough projections of likely NPV of all EuP policies. Levels of non-compliance (and potential for improvement) based on expert opinion & believed to be cautious, leading to a likely underestimate of Total Benefits. Assumes effective penalties regime (still to be implemented) and uses a scoring system for MSA options.

Price Base Year	Time Period Years	**Net Benefit Range** (NPV)	**NET BENEFIT** (NPV Best estimate)
		£ 30m to £ 86m	**£ 80m**

What is the geographic coverage of the policy/option?			UK	
On what date will the policy be implemented?			6 April 2010	
Which organisation(s) will enforce the policy?			TBD	
What is the total annual cost of enforcement for these organisations?			£ 0.6m - £1.9m	
Does enforcement comply with Hampton principles?			Yes	
Will implementation go beyond minimum EU requirements?			No	
What is the value of the proposed offsetting measure per year?			£	
What is the value of changes in greenhouse gas emissions?			£	
Will the proposal have a significant impact on competition?			No	
Annual cost (£-£) per organisation (excluding one-off)	Micro	Small	Medium	Large
Are any of these organisations exempt?	No	No	N/A	N/A

Impact on Admin Burdens Baseline (2005 Prices) (Increase - Decrease)

Increase of £ Decrease of £ **Net Impact** **£** negligible

Key: **Annual costs and benefits: Constant Prices** **(Net) Present Value**

Evidence Base (for summary sh

[Use this space (with a recommended maximum of 30 pages) to set out the evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Ensure that the information is organised in such a way as to explain clearly the summary information on the preceding pages of this form.]

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A: BACKGROUND

The EuP Framework Directive includes an obligation for Member States to put in place a robust market surveillance and enforcement regime to ensure compliance with the requirements of the various implementing measures. Specifically, the Directive requires Member States to put in place a **Market Surveillance Authority (MSA)** which has powers to carry out checks on products, request relevant information from manufacturers and request the recall of non compliant products.

The relevant requirements of the EuP and Energy Labelling Framework Directives are for manufacturers to ensure that the products they place on the market perform above the minimum standard set by EuP, and within the claimed performance declared on the energy label. The Energy Labelling Directive also includes a requirement on distributors to ensure that they display an energy label at the point of sale.

Responsibility for the enforcement of all of these requirements rests currently with Trading Standards Officers (TSOs) – referred to as local weights and measures authorities in the Regulations – in England, Wales and Scotland, and to the Department of Enterprise, Trade and Investment (DETI) in Northern Ireland. Currently there are eight Energy Labelling measures in force (on domestic fridges and freezers, washing machines, electric tumble dryers, combined washer-dryers, dishwashers, lamps, air conditioners and electric ovens) as well as the three minimum energy performance Directives brought under EuP in 2005.

Previous recent Impact Assessments for EuP Implementing Measures (both for Minimum Energy Performance Standards and Labelling measures) have assumed full compliance. Therefore, the development of a new enforcement mechanism is concerned with safeguarding the benefits already claimed; the 'benefits' outlined here are not additional to those previously stated.

It is inherently very difficult to get estimates of non-compliance, and it is also difficult to predict with any certainty what the effects of each enforcement mechanism would be. Therefore, the costs and benefits outlined in this document should be treated with caution, and are intended as a more general order-of-magnitude estimate of the likely impacts of each enforcement option.

B: CURRENT LEVELS OF NON-COMPLIANCE OF ENERGY USING PRODUCTS

There is no hard data available on levels of non-compliance, but estimates based on European wide research carried out by the European Consumer Standardisation group (ANEC) suggest that 15% of energy using products placed on the market are non-compliant with energy labelling and minimum standards legislation. There is a risk that with significantly more products being subject to Minimum Energy Performance Standards (MEPS) moving forward, this rate of non-compliance could increase. Countries with a history of compliance checking and high levels of consumer protection may have lower levels of non-compliance. The level of non-compliance also seems to vary between products: in the region of 10% for mature products and higher (15% or more) for less mature ones.

Interim results from recent testing funded by Defra's Market Transformation Programme (MTP) (on lamps, ovens, washer-dryers and cold appliances) found a consistent 25% failure to meet the declared Energy label claims across a wide range of products (lamps, ovens and cold appliances) as well as a 100% failure when measuring the performance of washer-dryers

Countries that carry out market surveillance testing more regularly have occasionally found levels of non-compliance reaching almost 50% of the products. However, of this, 40% would be using the maximum tolerance legally allowed by the testing regime (see below). Indeed, it appears that once manufacturers become confident about the performance of their product, they use the permitted tolerance as a routinely applied allowance to add to their energy claims.

TOLERANCES

The issue of tolerances is important in understanding the issue of non-compliance. When testing a product to determine whether or not it meets the mandatory minimum standards (MEPS), a tolerance built into the Regulation is applied to the results (this varies from 5% to 15% depending on the product and is described as an error allowance to mainly take into consideration the possible laboratory and measurement variations). Tolerances are set at the EU level and the UK has been pushing hard for excessive testing error allowances to be reduced, sometimes with success (e.g. TVs and washing machines). In the next 10 years it is likely that most tolerances will be reduced as we have been able to demonstrate through improved testing methodologies and 'round robin' testing that the variations in the manufacturing process and/or laboratory measurements are negligible.

A product not strictly meeting the MEPS level but falling within the tolerance level is still legally compliant and it is likely that in some cases manufacturers use the tolerance as an additional allowance. Experience to date suggests that products are designed with the tolerance 'built in'. A similar tolerance scenario is catered for in the energy efficiency index agreed under the Energy Labelling Framework Directive, and a product would for instance still be considered an A, even if the testing results show that its declared energy-label class is exceeded by [x%] providing it does not go past the agreed tolerance. However, products strictly deviating by one (or more) energy label class would be unlawfully claiming a higher class than the one they actually achieve and be deemed non-compliant.

C: COSTS AND BENEFITS OF NON-COMPLIANCE

Non-compliance has **two components**. Firstly, it results in projected reductions in energy consumption not being achieved, because products are not as efficient as they claim to be. Secondly, it means that manufacturers do not make the costly improvements necessary to meet the energy-efficiency standards they are claiming.

The costs and benefits of non-compliance for these two components are calculated separately, and this is explained in more detail below.

SAFEGUARDING COSTS AND BENEFITS

The Impact Assessments carried out to date on individual EuP and Energy Labelling regulations assessed the overall costs and benefits of the measures. However, no adjustments were made to account for non-compliance from both minimum performance standards and energy efficiency classes. Therefore, this Impact Assessment should be considered to be about safeguarding the net benefits previously claimed in individual IAs, and the costs and benefits arising from improved compliance levels are not additional to those in individual IAs.

(i) Projected reductions in energy consumption not being achieved

The table below summarises the estimated degree of product non-compliance, based on expert opinion. It assumes that 10% of products are legally non-compliant and that 40% of products are below their stated level but within the legal tolerance levels.

This form of permitted 'non-compliance' is being addressed here because, whilst the primary goal of stronger enforcement is to reduce the proportion of products not complying with the law, improvements in products within this tolerance are expected over time as manufacturers reacting to a stricter compliance and enforcement regime by reducing their tolerance risk and moving away from the assumed 10% non-compliance rate.

The overall non-compliance rate is calculated to be 6.2% (see table below), and is assumed to be analogous to the proportion of the projected energy savings that won't be achieved due to non-compliance.

This non-compliance rate can then be used to calculate the proportion of the overall benefits (e.g. reduced energy and CO_2e savings) and costs (e.g. non-traded CO_2e emissions from the Heat Replacement Effect) from reduced energy consumption that won't be achieved due to non-compliance.

	% of products in each 'non-compliance category'	% they are deviating from required standard	% currently lost from non-compliance
'Non-compliant' but within tolerance	40	10	4
Deviating by one energy label class	8	20	1.6
Deviating by more than one energy label class	2	30	0.6
TOTAL			**6.2**

Table 1 – estimated % level of compliance with the energy labelling framework directive

This estimated non-compliance rate is considered to be a very conservative estimate, assuming an average 10% legal non-compliance with the energy labelling framework directive. Non-compliance with MEPS is also expected to be significant but is not added to the current rate of non-compliance due to the risk of double-counting. In practice a product which does not meet the minimum energy label class has a high risk of not meeting the MEPS, thus infringing both regulations.

(ii) Manufacturers not making costly adjustments in order for products to be compliant

Whilst the above rate of non-compliance can be applied to changes in energy consumption, it is not suitable for calculating the costs avoided by manufacturers (which results in costs not incurred by consumers) through non-compliance. This is because some of the products that remain non-compliant (such as those deviating by more than one energy label class) may in fact incur little or none of the projected costs, as they achieve this level without few (if any) improvements being made by the manufacturer. Recent market picture testing carried out by the Market Transformation Programme did not find any evidence that cheaper products are less likely to perform as declared but this finding would need further sampling to be conclusive.

Therefore, again based on expert opinion, it is assumed that this 93.8% of the reduction in projected energy consumption improvements (100% minus 6.2%) can be achieved by only incurring **86%** of the costs to manufactures/consumers. In order to achieve the remaining 6.2% of reduction in energy consumption would incur **14%** of the projected total costs to manufacturers/consumers.

This 14% estimate is derived under the following assumptions:

- the 2% of products deviating by more than one energy label class will do so without incurring 100% of the projected cost to manufacturers.
- the 8% of products deviating by one energy label class will do so whilst avoiding 50% of the projected cost to manufacturers of compliance.

- The 40% of products deviating only within the legal tolerance will do so whilst avoiding 20% of the projected cost to manufacturers of compliance.

Therefore, (2% x 1) + (8% x 0.5) + (40% x 0.2) = 14% of costs to manufacturers, which are passed on to consumers, are avoided due to non-compliance.

(iii) Summary of costs and benefits of non-compliance

By netting-off the overall costs and benefits of EuP and Energy Labelling, we can estimate the total cost of non-compliance. Based on initial estimates of the total projected net benefits from EuP and ELD, for 21 product categories (for the period 2010-2020), the estimated Net Present Value of these measures is estimated to be as follows:

- **PV Total Benefits:** £11.3bn
- **PV Total Costs:** £2.7bn

It is also estimated that 80% of the total costs of EuP and ELD measures results from costs incurred by manufacturers and passed on to consumers, and 20% occurs due to costs associated with greater household heating (because of the Heat Replacement Effect when more efficient appliances are used).

The overall costs of non-compliance can be estimated as follows:

- Applying a 6.2% rate of non-compliance to the overall projected benefits from improving compliance (such as reduced energy bills and CO_2e savings), which provides a cost of non-compliance of £700m.

- Applying a 6.2% rate of non-compliance to the costs subsequently imposed on society due to increased household heating requirements (because of the Heat Replacement Effect), suggests a benefit of non-compliance of £34m.

- Applying a 14% rate of non-compliance to costs subsequently not incurred by the manufacturer or imposed on consumers, which suggests a benefit of non-compliance of £302m.

This results in total present value costs of non-compliance of £700m, and total present value benefits of non-compliance of £336m. Therefore, **the Net Present Value foregone due to non-compliance is £364m** (between the period 2010-2020).

CO_2e SAVINGS NOT ACHIEVED DUE TO NON-COMPLIANCE

Without an effective compliance regime in place, some of the projected CO_2e savings won't be realised. The extent to which CO_2e emissions will not be saved will depend on the actual performance of the products sold and by how much their efficiency was compromised.

Detailed analysis of carbon emissions savings has only been conducted for the 11 EuP measures that which have been or will be voted upon in early/mid 2009. However, from these 11 product areas alone, non-compliance could result in missing out on saving over 0.4 million tonnes of CO_2e a year by 2020.

This figure is calculated by taking the projected net CO_2e savings figures for 2020 (i.e. traded sector savings, minus non-traded sector increases), which is currently about 7.2Mt, and applying the estimated 6.2% rate of non compliance.

Other benefits not achieved due to non-compliance include reductions in energy bills. It is difficult to predict how much money could be lost by consumers who have bought products which operate at a higher energy consumption than expected. However, a significant amount of potential savings could be foregone.

Finally, the UK could be subject to infraction proceedings if it fails to put in place an effective enforcement regime. In the case of an unfavourable ruling, a significant lump sum fine could be imposed in addition to a daily fine, which may be imposed until an effective enforcement regime is put into place. It is difficult to predict the size of fines – likely to be substantial – although if there were any realistic prospect of fines corrective legal action would be sought immediately.

D: POSSIBLE REDUCTIONS IN NON-COMPLIANCE

Reductions in non-compliance will result in both benefits and costs. There will be benefits because, as compliance improves, a greater proportion of the projected energy savings will be achieved. This means consumers save more on energy bills and that there are greater CO_2e savings achieved. There will also be some costs because, as products become more efficient, the Heat Replacement Effect dictates that there will be more household heating (which costs consumers money and also increases CO_2e emissions in the non-traded sector). This is in addition to the administrative costs associated with reducing non-compliance, which are discussed in Section F.

The table below summarises the theoretical rate of non-compliance which could be achieved with a thorough compliance regime, based on the opinions of a number of experts. It constitutes our absolute target for improvement in this IA and assumes that an effective enforcement process is in place, where proportionate and meaningful fines – in the form of improved criminal sanctions and/or administrative penalties – would be issued. [Note: the penalties regime is currently subject to review under the Regulatory Enforcement and Sanctions Act.]

	% of products in each 'non-compliance category'	**Absolute deviation (%) from claimed energy savings with thorough compliance**	**% deviating from claimed savings could be reduced to...**
'Non-compliant' but within tolerance	40	5	2
Deviating by one energy-label class	8	5	0.4
Deviating by more than one energy label class	2	5	0.1
TOTAL			**2.5**

Table 2 – Potential % improvements in energy consumption due to greater compliance

It is estimated that the absolute deviation in each category of non-compliance (including that within legal tolerances) could be reduced to 5%. These estimates take into consideration the presence of 'free-riders' on the EU market who would always take the risk of importing and/or selling non-compliant products irrespective of the risk of being caught and prosecuted. In theory, the remaining 5% of non-compliance could be further reduced by an extended compliance regime, but the costs of achieving this are considered to be prohibitive.

Therefore, it is assumed that the best possible outcome would be for the losses of projected energy savings to be reduced from 6.2% to 2.5%. This implies **a maximum potential improvement of 3.7%.** This is the first component of non-compliance set out in Section G. The three options discussed below will be benchmarked against this absolute potential for improvement.

Reducing non-compliance will also mean that manufacturers will be spending more making their products compliant (and passing this cost on to consumers). This is the second component of non-compliance as set out in Section G. Under the current (baseline) level of non-compliance, which is 6.2%, it has been assumed that manufacturers will avoid 14% of the projected costs associated with full compliance.

As non-compliance reduces from 6.2%, the proportion of the costs to manufacturers avoided will reduce from 14% in a linear fashion. This means that, if non-compliance was reduced to 0%, 100% of the costs to manufacturers would be incurred. If the maximum potential improvement to compliance was made, reducing the non-compliance rate from 6.2% to 3.7%, the proportion of the costs that manufacturers avoid would reduce from 14% to 5.6%.

E: OPTIONS FOR A MARKET SURVEILLANCE AUTHORITY

Currently Trading Standards Officers (TSOs) are responsible for the enforcement of exisiting EuP and ELD implementing measures. The business-as-usual baseline for this analysis is a continuation of sporadic and low compliance checking (more information is provided on this in Section G below).

The three main options for the future of the compliance and enforcement regime of EuP and ELD are as follow:

> **Option 1:** To continue as now, with Trading Standards Officers (TSOs) carrying out the enforcement function for all products;
>
> **Option 2:** To move the enforcement function away from trading standards to a dedicated team in an existing Body or Agency;
>
> **Option 3**: A hybrid approach, where TSOs would retain responsibility for compliance of domestic products and a separate Body or Agency would enforce the requirements for non domestic products.

Regardless of which option is decided upon, the intention is that the enforcement of the retailer requirements to display an energy label at the point of sale should remain with TSOs, at least for the domestic products, as this fits well with their current activities of regular inspections in stores.

These options are outlined in more detail in the accompanying Consultation Document including an assesment of the main advantages and disavantages, which have been used to inform this Imapct Assessment.

F: COSTS OF IMPROVING RATES OF NON-COMPLIANCE

Irrespective of the Market Surveillance Authority option chosen, a certain budget will be required to carry out an effective compliance and enforcement regime of both EuP and ELD requirements. The UK needs to ensure that once all EuP measures are in force, some degree

of testing of each product group takes place. The total cost will depend on the stringency of the testing regime adopted by the MSA. Details of our analysis of the various costs expected to occur as well as the level of funding which would be desirable can be found below.

(i) Set-up costs and first years of implementation

In the event of a dedicated team being appointed under option 2 or 3, we would expect fixed costs related to such a set-up including salaries of 3-4 full time staff – to run such a testing programme and take enforcement action where necessary – to be around £160k pa. In comparison 1% of 1,500 TSOs' time in all of the UK (average salary of £25K) is equivalent to £375k pa in salary cost, with the actual cost of employment (NI, pension, admin and office costs etc.) being even higher. However for the purpose of this analysis we are factoring in that for TSOs with similar qualification the staffing cost associated with this enforcement regime would be equivalent to 3-4 full time staff 160k.

While certain requirements of EuP and ELD have already been in place for some years, any geared up activities in light of forthcoming measures should be accompanied with awareness raising activities, particularly in the first couple of years to publicise not only the requirements but also the changes to the compliance and enforcement regime. This will ensure that manufacturers and retailers are well aware of their obligations before envisaging any tougher actions against them.

Testing would still be taking place in the continuity of our current market surveillance activities but a fixed amount of resources – possibly as much as 40% of overall budget – would be diverted in 2010 to awareness raising campaigns and the design of resources (website, leaflets, guidance etc.) to inform businesses of their legal obligations. Some residual costs (c. £30k) will partially subside to maintain and update annually this pool of information.

(ii) Products testing costs

The estimates used below are broad and based on several assumptions around generic options (for example the cost of testing one household appliance is estimated at £2200 – the actual figure for fridges – when this could be over £5000 – e.g for Boilers testing) and an average figure of £3000 is used as an estimate for unknown product costs.

The estimates below are derived from our experience of product testing costs gained through running the MTP testing programme (e.g. 60 large appliances and 1400 lamps in FY 2008/09) and costs for the enforcement of similar single market Directives such as the RoHS (enforced by the NWML), Noise of outdoor machinery (enforced by VCA) and EMC (enforced by Ofcom and TSOs) Directives, which range from £300-£500k pa.

We know that resources required for EuP and ELD market surveillance will need to be significantly in excess of other product testing regime, because those Directives cover a far wider range of products spanning both the domestic and non domestic sectors, and the testing is far more expensive.

PRODUCT TESTING COSTS FOR MARKET SURVEILLANCE AUTHORITY

To ensure that the test sample is representative, around 12 products of each product category should be tested for every 800 models found on the market. Assuming a failure rate of 15% additional samples will have to be re-tested in accordance with the provisions of the regulations. In most cases a further 3 tests of each model would be necessary to prove non-compliance. Based on these assumptions, it is estimated that to cover any given product group (1.5% of the models over several categories) **£205,000** would be needed on average. This figure will vary depending on the final cost of testing each type of appliance and the number of models available on the market (see Annex 2 for details on the testing costs calculation).

Additional tests representing a smaller percentage of the products in each group can also be

carried out to draw a rough market picture of existing compliance while keeping manufacturers on their toes by publicising that such checks are taking place. In this case not all categories of product may be covered (e.g. only TVs are tested in the consumer electronics category) but at least 12 products in each group would be tested. We estimated that with the re-tests those 'sample' testing would cost on average **£52,000**.

Testing costs can vary hugely e.g. the cost of testing a lamp is a fraction of the cost of testing an item of commercial refrigeration and selective policing by testing in less detail across a wider range of products may usually turn out to be the most cost effective option.

All the options detailed below are illustrative of the potential work programme that the MSA could follow to ensure that products covered by the EuP and Energy Labelling framework directives are subject to some level of testing at some point during the current lifetime of the Directives.

Defining an effective testing rotation system not only enables us to refine the necessary budget requirements based on the desired outcome, but also give an indication of what an effective regime could achieve. Emphasis should be put on intelligence led testing building on the current market picture testing work carried out by the Government's Market Transformation Programme, which aims to cover the majority of manufacturers, or newly introduced brands, or a particular market sector, and may use other criteria such as the selling price compared to the market average or promotion via Ofgem Carbon Emission Reduction Target (CERT), or other scheme, to select models.

It is assumed that a testing regime with a two year rotation will be used by the Market Surveillance Authority (referred to as Regime 2 below). However, in order to give an indication of how the costs and benefits of the MSA Options are dependent on the Testing Regime pursued, two other Regime options (1 and 3 below) are also analysed.

Regime 1 – 5 years rotation

By carrying out detailed testing of 1 EuP product group each year and sampling 3 individual product categories, it would take 5 years to perform the testing of the 20 products, which will be subject to EuP and ELD in the next couple of years. It would however take 20 years before all product groups had been tested in detail. This amounts to **£361k pa** (£205,000 + (£52,000 x 3)).

Regime 2 – 2 years rotation

Detailed testing of individual products from 2 EuP product groups each year and sampling individual products from up to 8 further EuP product groups. In total therefore, some degree of testing would be performed on 10 product groups (half of the EuP product groups covered by implementing measures in 2-3 years) every year. It would take some 5 years for all product groups to be tested in detail at least once. Total testing costs would come to around **£826k pa** (£205,000 x 2 + (£52,000 x 8)). This should ensure that, once all EuP measures are in force, some degree of testing of each product group should take place at least every two years.

Regime 3 – 1 year full testing

If the compliance regime was to attempt to cover all 20 product groups in one year by doing both detailed testing (for 4 groups) and some sample testing (to cover 16 categories), then **£1,652k pa** would be needed (£205,000 x 4 + (£52,000 x 16)).

In order to calculate what changes in non-compliance would be if other Testing Regimes were pursued by the MSA, it has been assumed that Regime 1 (five year rotation) would only deliver

40% of the reduction estimated for Regime 2, whereas Regime 3 (one year rotation) would deliver **115%** of these reductions, albeit at higher cost.

These estimates are based on the testing rotation frequency and expected impact on the market place, and these assumptions have been used in analysing each MSA option to provide some sensitivity analysis on the expected costs and benefits of each enforcement regime.

(iii) Additional administrative costs

It is estimated that these costs will be at least £60k, for bringing prosecutions and other enforcement action.

(iv) Costs associated with the enforcement of the display of the Energy Label

It is not proposed to move away from TSOs as the enforcement body for retailer requirements to display an energy label at the point of sale, as this fits well with their current activities of regular inspections in stores. Their activities may therefore cover catalogue as well as online checks, although the MSA may carry out such examination in the build-up to products selection for testing purposes.

We estimate this activity to cost around £50k. Current settlement money should be enough to cover those checks. In the event of a prosecution this cost could rise to £100k, although if successful these costs can be claimed back. However moving away from TSOs part of their obligations with regards to product testing (as suggested in Option 2 and 3) would mean that the remaining costs would be more than offset by the shift.

Further considerations in relations with retaining TSOs role for the enforcement of label display include the information provision requirements under EuP and in particular the information display for motors and circulators which we would not be asking TSOs to enforce under this specific enforcement activity. A possible issue to resolve would be how to best address water heaters since this product category would be the only one where the A-G consumer facing label will apply to non domestic products. However TSOs can legally and are already in some cases acting in the non-domestic sphere.

ADDITIONAL POLICY AREAS THAT COULD BE COVERED

EC Regulation No.106/2008 requires EU institutions and central Member State government authorities to use energy efficiency criteria no less demanding than those defined in the ENERGY STAR programme when purchasing office equipment, effectively making non compliance with this programme an issue for Member States which are required to ensure the proper use of the ENERGY STAR marks within their respective territories.

To date no enforcement of this requirement has been carried out but addressing compliance issues related to this programme would be facilitated by having a dedicated body testing regularly for the energy-related performance of IT equipment. Test results could be used not only to enforce EuP/ELD but also the ENERGY STAR requirements.

(v) Summary of costs under each Testing Regime

The following tables provide the annual costs of enforcement under each Testing Regime, as outlined above. It also provides the total cost over the appraisal period (2010-2020), discounted to 2009.

Regime 1 - annual testing costs	361,000
Staffing costs (annual)	160,000
Additional admin costs (annual)	60,000
Energy label display enforcement (annual)	50,000

Regime 1 total costs (discounted to 2009) for the period 2010-2020: **£5.7m**

Regime 2 - annual testing costs	826,000
Staffing costs (annual)	160,000
Additional admin costs (annual)	60,000
Energy label display enforcement (annual)	50,000

Regime 2 total costs (discounted to 2009) for the period 2010-2020: **£9.9m**

Regime 3 - annual testing costs	1,652,000
Staffing costs (annual)	160,000
Additional admin costs (annual)	60,000
Energy label display enforcement (annual)	50,000

Regime 3 total costs (discounted to 2009) for the period 2010-2020: **£17.3m**

G: COST-BENEFIT ANALYSIS OF MARKET SURVEILLANCE AUTHORITY OPTIONS

Estimated reductions in non-compliance rates are considered below for each of the MSA options, under the expected testing regime (Regime 2) and also under the two alternative regimes (Regime 1 and Regime 3).

Calculations below highlight the reduction in benefits foregone due to non-compliance for each option. This is compared to the associated costs that are incurred by reducing non-compliance, which includes administrative costs, the additional costs imposed on consumers and the greater heating bills and non-traded CO_2e emissions due to the Heat Replacement Effect.

(i) Baseline for assessment

Trading Standards Officers (TSOs) are responsible for the enforcement of all current implementing measures under the Energy Labelling (eight measures) as well as the three minimum energy performance Directives brought under EuP in 2005. In the last 15 or so years of TSO enforcement of the labelling directive, and more recently energy efficiency requirements brought under the EuP Directive, there have not been any successful prosecutions of manufacturers for mis-labelling their products. Ten years ago there was one prosecution of a retailer incorrectly displaying the energy label in a shop. While prosecution cannot itself be considered a factor of success, this still reflects the difficulties of current enforcement in this area. The only testing taking place at present to enforce the labelling requirements on manufacturers are being carried out by a TSO from Northamptonshire in partnership with Defra's Market Transformation Programme (MTP), which is providing the necessary funding.

(ii) Methodology used to determine potential improvements

A scoring system for each of the three MSA options has been used, using the factors described below to determine the expected changes in absolute non-compliance (both legal non-compliance, and products that use tolerances to deliver less-than-expected energy efficiency standards, as previously discussed). This approach has been adopted because of the difficulties in anticipating the exact impacts of different MSA options, and is not intended to be viewed with too much certainty. Instead, it is intended to provide a rough indication of the likely effectiveness of the three MSA options.

The scoring system uses the qualitative requirements of any effective regime and is based on a 2007 internal report entitled '*Review of UK enforcement arrangements for mandatory energy labelling and eco-design requirements'*, as well as lessons learned from similar regimes such as RoHS and meetings with local and central government officers dealing with compliance and enforcement activities. The scoring was peer-reviewed by policy colleagues to help ensure its robustness.

The eight factors are as follows:

Continuity of knowledge - This factor acts as an enabler by ensuring that skills acquired in similar compliance and/or enforcement situation can be transferred. Knowledge of the process and the market place is essential to perform all duties at the best possible capacity.

Capacity building - Issues such as the availability of testing laboratories can be overcome through longer-term arrangements and the knowledge that work will be available year on year. Capacity building is essential to ensure the success of any recurring testing programme.

Prioritisation - For enforcement to be effective, compliance needs to be a high priority within the organisation carrying out the enforcement function. The market surveillance and enforcement process is cumbersome and lengthy, and a lack of focus could result in missed opportunities.

Allocation of resources - A dedicated team and the availability of directing funding are essential components which can 'make or break' such a regime.

Consistency of approach - In the case of globally manufactured products and due to the Single Market rule an importer/supplier of a product suspected of non-compliance can be located anywhere within the EU. The Market Surveillance Authority need to ensure a consistent approach across the UK irrespectively of the location of the offence or of the office.

Strategic control - Ability to have control over the market surveillance process allows for systematic and targeted checks to take place. It also provides stakeholders with the certainty that the enforcers are in control of the process.

Expertise - Product testing for the purpose of energy efficiency and other environmental criteria is a very specialised field. The availability to develop and maintain a team of experts who understand the legal requirements, the applicability of standards and products performance is essential.

EU/International coordination - The effectiveness of enforcement across the EU could be strengthened through more sharing of results and the development of an understanding of compliance. Lessons learned from other countries as well as access to other Member States data and in some cases their intervention to facilitate prosecution would also contribute to a more effective compliance regime.

Below are the results of the qualitative assessment carried out on a 1-10 scale of all the MSA options being considered to determine absolute and relative cost changes in non-compliance for each option. These figures were agreed following an internal review by Government experts in this policy area. A low score means a negative impact, and a high score a positive impact.

Therefore, 80/80 is the maximum score possible, and under this system would equate to a full realisation of the potential for reducing non-compliance. As previously discussed, it is not considered possible to completely remove non-compliance, at least not without a prohibitively expensive and burdensome policy regime.

OPTION 1: Remit of TSOs extended to cover all EuP and ELD measures

Option 1 - TSOs	Score (1-10)	Justification
Continuity of knowledge	5	TSOs already enforce similar legislations
Capacity building	2	Inconsistent messages to market place make it very difficult to build a network of test houses
Prioritisation	2	There is evidence of some pockets of activity
Allocation of resources	1	Expensive testing is not affordable for each individual local authority
Consistency of approach	3	Some evidence of local authority grouping and coordination to share best practice
Strategic control	2	In principle TSOs have the potential to coordinate actions but very difficult
Expertise	2	Evidence of some expertise
EU/International coordination	4	Coordination with individual local authorities across the EU possible
TOTAL SCORE	**21/80**	Funding is not ring-fenced and pockets of expertise are sporadic

Under this system, a score of 21 out of 80 translates to achieving 26.3% of the realistic potential for reductions in non-compliance. The total realistic potential is 3.7% [as detailed in Section A(c)], and so this option reduces compliance by (3.7 x 0.263) = **1%.**

Therefore, **this option results in a non-compliance rate of 5.2%** (down from 6.2%).

OPTION 2: MSA role carried out by an existing Executive Agency

Option 2 – Central Agency	Score (1-10)	Justification
Continuity of knowledge	5	Easier to bring back knowledge in one body
Capacity building	8	Certainty given to the market place regarding the need for year on year testing
Prioritisation	9	The only task of the Agency/Body will be market surveillance of those Directives
Allocation of resources	10	Full allocation of resources to the task
Consistency of approach	8	Difficulty to achieve complete consistency but

		best placed to reach out
Strategic control	9	Capacity to control the process from start to finish without external interference albeit steer from central Government
Expertise	8	Grasp of general principles and building up of expertise on technical product knowledge
EU/International coordination	7	Rely on effective communications with other EU agencies and EC Advisory Committee
TOTAL SCORE	**64/80**	Ability to ring-fence funding, and develop and maintain expertise

Under this system, a score of 64 out of 80 translates to achieving 80% of the realistic potential for reductions in non-compliance. The total realistic potential is 3.7% [as detailed in Section A(c)], and so this option reduces compliance by (3.7 x 0.8) = **3%.**

Therefore, **this option results in a non-compliance rate of 3.2%** (down from 6.2%).

OPTION 3: Hybrid option of shared responsibility between TSOs and Executive Agency

Option 3 - Hybrid	Score (1-10)	Justification
Continuity of knowledge	4	Uncertainty of knowledge crossing between the shared Market Surveillance Authorities
Capacity building	4	Some aspects (commercial products testing) will carry certainty
Prioritisation	5	Priorities can be worked through but require coordination
Allocation of resources	5	Some allocation guaranteed
Consistency of approach	3	some pockets of consistency but risk of confusion across market for manufacturers of both domestic and commercial products
Strategic control	4	Elements of strategic control but overall planning not put together
Expertise	4	Pockets of expertise would need tapping into
EU/International coordination	4	Would require improved efforts to coordinate with Europe
TOTAL SCORE	**33/80**	Risk of crossovers and inconsistencies but commercial products' compliance ring-fenced

Under this system, a score of 33 out of 80 translates to achieving 41.3% of the realistic potential for reductions in non-compliance. The total realistic potential is 3.7% [as detailed in Section A(c)], and so this option reduces compliance by (3.7 x 0.413) = **1.5%.**

Therefore, **this option results in a non-compliance rate of 4.7%** (down from 6.2%).

(iii) Non-monetised benefits of an effective compliance regime

A thorough testing regime would also attract other significant benefits that it is not possible to quantify or monetise. By ensuring that a level-playing field is created for UK manufacturers and businesses this regime will be seen as particularly favourable in the current economic climate. Also, as manufacturers become more compliant overtime a virtuous circle of compliance is established and stakeholders such as trade associations can actively, and with confidence, promote energy efficiency messages

Less non-compliant products on the market will also increase consumers' confidence in the purchases they make. It is also essential that in further developing product policies the Government has confidence in the actual levels of performance of the energy-using products procured and sold on the UK market, while contributing to the single market goals of the European Community.

COMPETITION ASSESSMENT

Improving compliance in the market for Energy using Products is expected to increase competition, helping to create a 'level playing field' between manufacturers and between retailers.

It is unlikely that a more stringent enforcement mechanism will lead to any changes in the number of firms on the market, or the ease at which new firms can enter the market. It will also not contribute to the possibility of anti-competitive behaviour between manufacturers or between retailers.

It is possible that, if a firm has previously been producing illegal non-compliant products, they could lose market share as a result of better enforcement. However, there is expected to be an overall positive impact on competition, ensuring that all firms are competing on equal terms and ensuring that consumers can have confidence in the claims made by manufacturers and the information that they are provided with.

(iv) SUMMARY RESULTS

Assuming that Testing Regime 2 (which uses a two year rotation) is in use, the reductions in non-compliance under each of the three MSA options are as follows:

Market Surveillance Authority options	**Changes in savings foregone due to non-compliance (%)**
Option 1 – TSOs extended	**6.2** → **5.2** = a difference of 1%
Option 2 – Central Agency	**6.2** → **3.2** = a difference of 3%
Option 3 – Hybrid	**6.2** → **4.7** = a difference of 1.5%
Absolute potential	*6.2 → 2.5 = a difference of 3.7%*

Table 3 – Comparison of improvements in compliance

It should be clear that, due to the difficulties and uncertainties in estimating the current rates of non-compliance, and the effects of different enforcement mechanisms, these estimates should be treated very cautiously and are intended only as indicative estimates of the likely impacts.

The preferred Market Surveillance Authority option is Option 2 (Government Agency), which provides a Net Present Value between £64.0m and £182.9m. Full results for each MSA Option are presented below. To show the sensitivity of the findings to the testing regime adopted, results are shown under Regimes 1 and 3 in addition to the likely Regime 2.

MSA Option 1 - TSOs	Total Costs	Total Benefits	NPV	Benefit-Cost Ratio
Regime 1 (five year rotation)	26,726,653	43,900,500	17,173,847	1.6
Regime 2 (two year rotation)	62,482,385	109,751,250	47,268,865	1.8
Regime 3 (one year rotation)	77,810,169	126,213,938	48,403,768	1.6

MSA Option 2 - Central Agency	Total Costs	Total Benefits	NPV	Benefit-Cost Ratio
Regime 1 (five year rotation)	69,822,224	133,792,000	63,969,776	1.9
Regime 2 (two year rotation)	170,221,313	334,480,000	164,258,687	2.0
Regime 3 (one year rotation)	201,709,936	384,652,000	182,942,064	1.9

MSA Option 3 - Hybrid	Total Costs	Total Benefits	NPV	Benefit-Cost Ratio
Regime 1 (five year rotation)	38,753,324	68,986,500	30,233,176	1.8
Regime 2 (two year rotation)	92,549,063	172,466,250	79,917,187	1.9
Regime 3 (one year rotation)	112,386,848	198,336,188	85,949,339	1.8

Tables 4 - Summary information for each MSA Option over the period 2010-2020 (11 years), under all three Testing Regimes.

While regime 3 offers a greater net present value (around 10% higher than regime 2), it is assumed that a 2 years rotation programme will be used by the Market Surveillance Authority. The administrative costs of regime 2 (in particular the annual testing costs) are half of those of regime 3 – lower by almost £1m per annum – and regime 3 would pose a significant financial burden under tight financial constraints, which would only offer marginal improvements.

H: RECUPERATING TESTING COSTS

The EuP implementing measures use testing standards that require in most cases that, if an appliance fails the first test, re-tests should be performed on three further samples in order to demonstrate that the first test sample was not simply on a 'rogue' model. Therefore, the total costs of testing a single model to demonstrate that it is under performing can easily reach £8-20k or more.

This Impact Assessment assumed that the entire budget for the Testing Regime is needed for the Market Surveillance Authority to function correctly as it will have to test up to 4 products to demonstrate non-compliance. Currently TSOs are able to recuperate their costs following successful prosecutions only.

We are proposing to clarify in the UK legal texts that the MSA should test one model and, should that fail, the onus of paying for the cost of re-tests will fall to the manufacturers in order to demonstrate that the first test was a rogue result. Minimum cost to business would be £0 if

their products are found compliant. Maximum cost could reach £36k (4 samples and 12 retests) depending on how many models from the same make are found non-compliant in the first test.

Cost sharing would mean that a proportion of the budget outlined above would not be needed, as this has been calculated taking into account all expected retests.

Specific Impact Tests: Checklist

Use the table below to demonstrate how broadly you have considered the potential impacts of your policy options.

Ensure that the results of any tests that impact on the cost-benefit analysis are contained within the main evidence base; other results may be annexed.

Type of testing undertaken	*Results in Evidence Base?*	*Results annexed?*
Competition Assessment	Yes	No
Small Firms Impact Test	No	No
Legal Aid	No	No
Sustainable Development	No	No
Carbon Assessment	Yes	No
Other Environment	Yes	No
Health Impact Assessment	No	No
Race Equality	No	No
Disability Equality	No	No
Gender Equality	No	No
Human Rights	No	No
Rural Proofing	No	No

Annexes

Annex 1 – List of products subject to EuP and ELD requirements

Product group	Domestic/Commercial	Sub-categories	EuP	ELD
Battery Chargers and External Power Supplies	Domestic		Y	
Boilers	Domestic		Y	
Cold appliances	Domestic	Fridges, fridge-freezers	Y	Y
Fans	Commercial		Y	
General Lighting	Domestic		Y	Y
Motors	Commercial		Y	
Pumps & circulators	Commercial		Y	
Simple Set top Boxes	Domestic		Y	
Televisions	Domestic		Y	Y
Tertiary Lighting	Commercial		Y	
Water Heaters	Domestic		Y	Y
Wet appliances	Domestic	Washing machines, dishwashers	Y	Y
Standby power consumption and off mode	Domestic/Commercial	Horizontal requirement	Y	

List to be completed with energy-using products post 2010

Annex 2 – Product group testing costs

Detailed testing group example: Domestic Wet Goods

The domestic wet goods product group is representative of the types of products which will be tested under this compliance regime. It consists of:

Small and large washing machines – currently around 950 models on the market

washer/driers and dishwashers – currently around 900 models on the market

In total, following introduction of the measures, we can expect there to be at least 1700 models on the market.

Testing 12 products each from Large Washing Machines, Small Washing Machines, Washer/Driers, Dishwashers = 48 products @ £3000 each) = **£144,000**

Retesting at estimated 15% failure rate (7 products fail, test a further 3 of each = 21 products) = **£63,000**

Total detailed testing cost for four specific products from the Domestic Wet Group (£144,000 + £63,000) = **£207,000 (rounded to £205K)**