

Energy Saving Recommended: Key Principles for a Successful Product Labelling Scheme

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Abstract

In July 2000, the Energy Saving Trust established the Energy Saving Recommended product labelling scheme to direct consumers to the most energy efficient products in the market. By using the Energy Saving Recommended label across the 19 different product groups, manufacturers, suppliers and retailers can help consumers to reduce their energy consumption and carbon emissions. The 96 certified manufacturers and suppliers contribute to over 1700 products, all available through a publicly accessible online database.

Where products can be differentiated by their energy efficient properties, the Scheme aims to endorse the top 20% of products in class. This aim is realised through a consistent standard revision process for each of the product groups. Between April 2005 and March 2006, nine product standard revisions were completed. The Scheme continues to expand through:

- a thorough standard-setting and revision process that gathers industry support and commitment, calculates the energy savings derived from endorsement, details the current and projected product sales with and without endorsement, and sets clear objectives;
- providing manufacturers and suppliers with a detailed future direction on product standards;
- a strong working relationship with partners (e.g., the Partnership's industry sector working groups provide market perspective, Defra's Market Transformation Programme provides technical support and ensures coherency with wider Government policy; all proposals for standard revision are peer reviewed by an independent panel of experts); and
- the legal rights afforded from the label's certification mark status allows enforcement activity.

Regular product compliance and label monitoring exercises build on the credibility of the label. The Scheme constantly looks for ways to further embed itself within the marketplace and frequent evaluation exercises confirm that both consumers and the trade recognise the label and indicate that it influences consumers purchasing decisions, leading to improvements in environmental quality.

By using an approach embracing national and international best practice, the Scheme will continue to grow in effectiveness, building on enforcement activities, invoking continual improvement and benchmarking and fostering greater links with the industry.

Introduction

Carbon dioxide (CO₂) emissions from the domestic sector represent 27% of the UK's total emissions [1]. These emissions make a significant contribution to global warming and associated climate change and provide policy makers with a significant challenge. One of a number of tools within environmental policy used to counter this challenge are Environmental Product Information Schemes (EPIS) – systems which provide ecological information on products and services [2]. EPIS cover mandatory and voluntary approaches, independent, third-party labelling and self-declared green claims by companies. EPIS highlight products' environmental credentials, quality and performance. The International Standards Organisation (ISO) provides standards and operating principles for EPIS, and creates a benchmark for measuring best practice. The UK's Energy Saving Recommended product labelling scheme is an example of an EPIS, encompassing its own compliance testing, enforcement activity and evaluation for environmental effectiveness and improvements in environmental quality.

Background

ISO have provided a set of general operating principles for EPIS. The package of nine general principles for environmental labels sets the standard for best practice and creates a useful tool for assessing EPIS; the principles are presented below in table 1.

Environmental Labels and Declarations – General Principles (Table 1)

Ref	Principle
1	Environmental labels and declarations shall be accurate, verifiable, relevant and not misleading
2	Procedures and requirements for environmental labels and declarations shall not be prepared, adopted, or applied with a view to, or with the effect of, creating unnecessary obstacles to international trade.
3	Environmental labels and declarations shall be based on scientific methodology that is sufficiently thorough and comprehensive to support the claim and that produces results that are accurate and reproducible
4	Information concerning the procedure, methodology, and any criteria used to support environmental labels and declarations shall be available and provided upon request to all interested parties.
5	The development of environmental labels and declarations shall take into consideration all relevant aspects of the life cycle of the product.
6	Environmental labels and declarations shall not inhibit innovation which maintains or has the potential to improve environmental performance.
7	Any administrative requirements or information demands related to environmental labels and declarations shall be limited to those necessary to establish conformance with applicable criteria and standards of the labels and declarations.
8	The process of developing environmental labels and declarations should include an open, participatory consultation with interested parties. Reasonable efforts should be made to achieve a consensus throughout the process.
9	Information on the environmental aspects of products and services relevant to an environmental label or declaration shall be available to purchasers and potential purchasers from the party making the environmental label or declaration.

Source: British Standards Institution [3]

Classification of Environmental Labels and Declarations

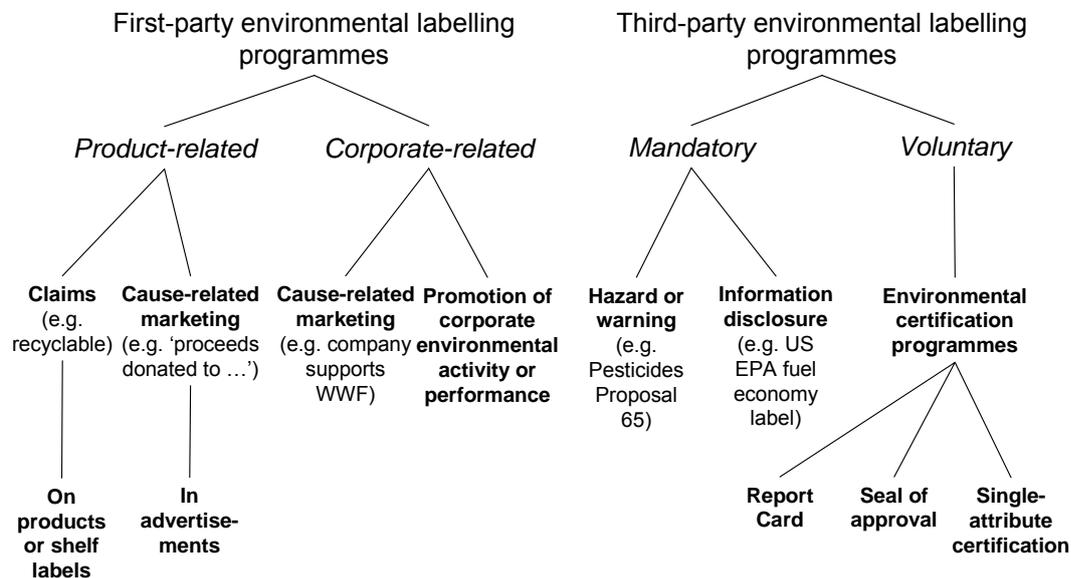
In addition to the general operating principles for environmental labels, ISO has identified three classes of environmental labels and published standards on each of them; the definitions are presented in table 2 below.

ISO Classification of Environmental Labels and Declarations (Table 2)

Ref	Definition
Type I	Voluntary, multiple-criteria-based third party programme that awards a license which authorises the use of environmental labels on products indicating overall environmental preferability of a product within a particular product category based on life cycle considerations.
Type II	A self-declared environmental claim is an environmental claim that is made, without independent third party certification, by manufacturers, importers, distributors, retailers or anyone else likely to benefit from such a claim.
Type III	Quantified environmental data for a product with pre-set categories of parameters based on the ISO 14040 series of standards, but not excluding additional environmental information provided with a Type III environmental declaration programme

Source: British Standards Institution [4], [5] and [6]

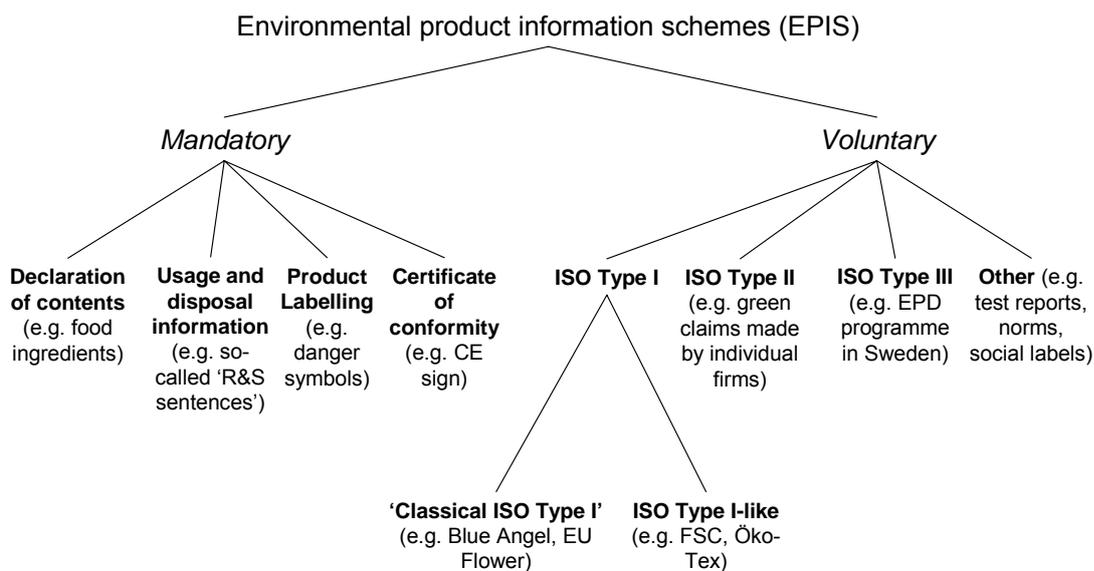
Prior to the standards and definitions for environmental labels and declarations published by ISO, the U.S. Environmental Protection Agency (EPA) produced a defining classification for environmental labels, presented in figure 1 below.



Classification of Environmental Labelling (Figure 1)

Source: U.S. EPA [7]

In 2005 Rubik and Frankl revised the 1998 EPA classification for environmental labels and declarations and presented the schematic within the terms of the ISO standards for Type I, II and III labels and declarations (figure 2).



Classification of Environmental Product Information Schemes (Figure 2)

Source: Rubik and Frankl [2]. EPD = environmental product declaration; FSC = Forest Stewardship Council; R&S = risk and safety

Environmental Effectiveness and Success of Environmental Product Labelling Schemes

The United Nations Environment Programme (UNEP) recently reported [8] on an investigation into the current understanding on the environmental effectiveness of ecolabelling. After reviewing five ecolabelling programmes, including the Blue Angel programme and labels in the marine, forestry, organic and fair-trade sectors, the report concluded that there was not adequate data on their environmental effectiveness. None of the five selected ecolabelling programmes had a monitoring system in place to assess its environmental effectiveness. Furthermore, it concluded that this was a problem endemic across ecolabelling in general. Rubik and Frankl reached a similar conclusion after conducting a review of environmental effectiveness studies on eco-labelling programs for their 2005 publication. The notable exception was the study performed on the White Swan in 2000 [2]. The review of the EU Eco-label, a process which started in 2004, is nearing conclusion and a recent report confirmed the concerns over the effectiveness of the label. No quantifiable environmental improvements were presented, and the issue of low awareness and recognition was confirmed. A significant change to the scheme remains an option; the Commission will consider the recommendations and decide on the future of the scheme later in 2006 [10]. Considering single issue, ISO type I-like labels, in a recent paper on the EU Energy Star, the European Commission confirmed that it has not conducted a study on the environmental effectiveness of the programme, but nevertheless does consider that the programme has contributed to an improvement in the energy efficiency of office equipment [9].

In the absence of studies into environmental effectiveness, reliance typically is placed instead on less reliable proxy indicators of effectiveness. The UNEP report identified two types. Quantifiable performance data covers for example the number of product categories, the frequency of criteria upgrade and the number of companies and products certified. Qualitative information on the credibility of the labelling scheme refers to the process undergone for developing the ecolabel and the names and types of organisations that endorse and support it. The report further concludes that the ISO 14020 series of standards has not succeeded in promoting a more considered use of the term ecolabel and calls for a more refined and comprehensive methodology for categorising ecolabels. UNEP reported that, whilst effectiveness must be measured by environmental improvements, on a practical level success is often measured by proxy indicators of the label's scope of influence, rather than its impact. Quantifiable indicators of success include market share, adoption rates, consumer awareness and frequency in the upward revision of criteria. These are effectively the measures by which labels can bring about desired market transformation. Furthermore, the report concluded that the most successful ecolabels do not simply address consumer preferences but are designed as a complement to other policy initiatives. Product labelling needs to be integrated with other environmental policy instruments and to be part of a coherent policy-making structure. Effectiveness therefore depends on the ecolabel's interaction with other policy initiatives and their success.

National and International Context

It is an important year for developing product policy both within the UK and internationally. Within the UK, the Budget 2006 announcement of voluntary schemes included the potential for labelling in the retail sector to encourage the purchase of more efficient alternatives in consumer electronics. Also, the UK Government has committed to deliver an action plan by the end of the year for the development of sustainable products as announced in its Sustainable Development Strategy – Securing the Future. Finally, the UK is hosting the 4th International EEDAL conference. At the European level, there are the 14 product-group studies that will identify prospective implementing measures for the Eco-design directive for energy-using Products. Also, at the European level there is the progression of the EU's Green Paper on Energy Efficiency and the review of the Energy Labelling Framework Directive. Internationally, the Taskforce for Sustainable Products (ITFSP) is developing coordinated action focusing particularly on lighting and consumer electronics. The Task force is mapping existing product standards and mandatory and voluntary labelling initiatives [11]. Following the G8 Plan of Action on Climate Change, Clean Energy and Sustainable Development, the International Energy Agency has been charged with reviewing existing global appliance standards with a view to building co-operation in the future development of labels and standards [12]. The Communities of Practice initiative, led by the Asia-Pacific Economic Cooperation's Energy Standards Information System, aims to provide an open and transparent forum for input and collaboration among stakeholders in particular product groups. There are currently developed Communities of Practice in

CFLs [13], set top boxes [14] and standby power consumption and emerging groups in motors. Further groups are expected.

Energy Saving Recommended

The Energy Saving Recommended Scheme was established at the request of the UK Department for the Environment and launched in July 2000. Energy Saving Recommended is a voluntary product labelling scheme for domestic energy saving products (figure 3) and is classified as an ISO Type I-like environmental labelling scheme according to the Rubik and Frankl classification. Its broad aim is to signpost consumers to the most energy saving products in the market. Through Government funding, the Energy Saving Trust can use Energy Saving Recommended as a tool to deliver energy and carbon savings via its interaction with the various energy efficiency stakeholders in the UK. The scope of the Scheme, its key working principles, the evaluation exercises conducted on it, and the monitoring and compliance activities that support it, are reported on below.



Energy Saving Recommended Certification Mark (Figure 3)

Source: Energy Saving Trust [15]

Scope

Over 1700 products, 96 manufacturers and 32 retailers are certified under the Scheme. All members of the Scheme and the certified products are available for public viewing on a database (www.est.org.uk/recommended). The validity and integrity of the data presented to the public is maintained through a six-weekly review of the certified products. This process involves making contact with each member every six-weeks and seeking confirmation that the certified products are in production and available for purchase in the UK.

The scheme has endorsement criteria established in 19 different product groups covering the five dominant sectors of the market responsible for products that save energy in the home. The product groups, sectors and the number of certified products within each are presented in table 3 along with the method of conformity assessment (independent, third-party testing or manufacturers' self-declaration). The endorsement criteria for each of the 19 product groups are defined in table 4.

The policies, processes and procedures utilised in operating the scheme all stem from the Scheme Rules [15] – the document necessary to register the label as a certification mark with the UK Trade Marks Registry. The Scheme's endorsement criteria, its targets for setting and reviewing these criteria, its policies on monitoring and compliance, label usage and complaints and the process for registering with the Scheme, are all included within the Rules. Once completed, the Rules form a contract with the Member and serves as a licence for using the label. These elements are explored in greater detail below.

Defined Sector and Product Scope; Energy Saving Recommended Product Labelling Scheme (Table 3)

Sector	Product Group	Approval Format	Spread
Appliances (White & Brown Goods)	Cold Appliances	Self Declaration	108
	Washing Machines	Self Declaration	77
	Dishwashers	Self Declaration	117
	Electric Tumble Dryers	Self Declaration	20
	Integrated Digital Televisions	Self Declaration	46
	Energy Saving Mains Controllers	Third Party Testing	0
Heating	Natural Gas and LPG Boilers	Third Party Testing	468
	Oil Boilers	Third Party Testing	79
	Gas Central Heating Controls	Self Declaration	298
	Hot Water Cylinders	Third Party Testing	1
Insulation	Cavity Wall Insulation	Third Party Testing	7
	Loft Insulation	Self Declaration	16
	External Wall Insulation	Third Party Testing / Self Declaration	7
	Dry Lining Insulation	Third Party Testing	1
Lighting	Compact Fluorescent Lightbulbs (CFLs)	Third Party Testing	158
	Candle Effect CFLs	Third Party Testing	12
	Halogen Bulbs	Third Party Testing	1
	Dedicated Low Energy Luminaires	Third Party Testing	276
Glazing	Windows	Third Party Testing	14

Source: Energy Saving Trust [15]. Figures correct as of 31 March 2006

Key Working Principles

Four particularly significant aspects of the Energy Saving Recommended scheme have been singled out for further elaboration below.

Certification Mark Status

The Energy Saving Recommended label is a registered certification mark with UK Trade Marks Registry. A certification mark goes a step further than a trademark. Presence of a certification mark indicates that the product on which it is used is certified in respect of a particular characteristic. In the case of Energy Saving Recommended, the characteristic is its energy saving potential. Having certification mark status grants the label legal enforcement rights. These rights benefit the credibility of the Scheme by allowing misuse of the Mark to be effectively followed up and rectified.

Standard Setting and Review Process

The standard-setting process is supported by a detailed procedure for justifying the endorsement of the product category. The procedure involves: specifying the energy savings endorsement would deliver; forecasting future sales with and without endorsement; defining objectives for endorsement and setting milestones for their review; explaining how product endorsement complements the wider national and international product policy agenda; and specifying details of stakeholder support e.g. manufacturers, suppliers, associations, NGOs etc. Once established, the Scheme has an objective to

review the product endorsement criteria on an annual basis. The nine endorsement criteria reviews conducted and completed in financial year 2005/6 are presented in table 5. The endorsement criteria review procedure involves addressing similar areas to that answered in the original justification. This ensures that the continued argument for endorsement remains valid. The Scheme has an objective, where product groups can be differentiated by their energy efficiency properties, to endorse the top 20% of the market. The objectives set for the programme and the procedures established for their delivery helps to ensure objectives continue to be met.

Product Groups and Endorsement Criteria (Table 4)

Product Group	Criteria
Cold Appliances	EU Energy Label A+ for Energy and above
Washing Machines	EU Energy Label AAA (Energy, Spin Efficiency and Wash Performance)
Dishwashers	EU Energy Label AAA (Energy, Dry and Clean) plus the EU Eco-label criteria for water consumption ($<0.625s+9.25$ litres where s is the number of place settings).
Electric Tumble Dryers	EU Energy Label B for Energy and above. EU Energy Label C for Energy when combined with an automatic drying function
Integrated Digital Televisions	Less than or equal to 1.5W on standby and less than or equal to 250W on on-mode
Energy Saving Mains Controllers	Automatic switch off of desktop computer peripherals when computer is switched off with $\leq 1W$ power consumption in standby mode and conformance with: BS 1363-2:1995 and BS 5733:1995
Natural Gas and Liquid Petroleum Gas (LPG) Boilers	SEDBUK band A
Oil Boilers	SEDBUK band A. Manufacturers must make a commitment to contribute sales figures of endorsed boilers into a bonafide industry led data collection scheme.
Gas Central Heating Controls	Conformance with at least the basic recommendations within the Energy Efficiency Best Practice for Homes' Central Heating System Specification (CHeSS) guide 2005. Product instruction booklets must display at the front the Plain English Campaign approved explanatory text.
Hot Water Cylinders	Conformance with Note 8 of CHeSS, 2002
Retrofit Cavity Wall Insulation: mineral wool & polystyrene beads	BBA certified conformance with BS 5628-3:2001 BS 8208-1:1985 BS 8000-3:2001 and BS 476-4:1970. Products must be accompanied by an independent 25-year guarantee against defects in workmanship and materials
Loft Insulation	EN 13162 and BS 5803 parts 2, 3, 4 and 5. Thickness required 270mm
External Wall Insulation	BBA or Wimlas registered; certified products meet BS 5262:1991, fitted to the Energy Efficiency Best Practice for Homes' publication External Insulation for Walls of Dwellings; guarantee ≥ 10 years
Dry Lining Insulation	A U value of 1.58 W/m ² K for flexible linings or 0.45 for thermal board
Compact Fluorescent Lightbulbs (CFLs)	Energy Saving Trust Lamp Specification v4
Candle Effect CFLs	Energy Saving Trust Lamp Specification v4
Halogen Bulbs	Energy Saving Trust Lamp Specification v4
Luminaires	Low Energy Luminaires Specification 2001
Windows	British Fenestration Rating Council's Window Energy Rating C or above

Source: Energy Saving Trust [15]

Product Standard Revisions in 2005/6 (Table 5)

Product Group	Date of Review	Previous Criteria	Revised Criteria
Dishwashers	May 2005	EU Energy Label A for Energy	EU Energy Label AAA (Energy, Dry and Clean) plus the EU Eco-label criteria for water consumption ($<0.625s+9.25$ litres where s is the number of place settings).
Natural Gas and LPG Boilers	May 2005	SEDBUK band B or above	SEDBUK band A
Gas Central Heating Controls	August 2005	Products conformance with the Energy Efficiency Best Practice for Homes' Good Practice Guide 302	Conformance with at least the basic recommendations within the Energy Efficiency Best Practice for Homes' Central Heating System Specification guide 2005. Product instruction booklets must display at the front the Plain English Campaign approved explanatory text.
Integrated Digital Televisions (IDTVs)	August 2005	IDTVs using cathode ray tube technology with a standby consumption of less than 2W and an on mode consumption of less than 120W	Less than or equal to 1.5W on standby and less than or equal to 250W on on-mode
External Wall Insulation	August 2005	British Board of Agreement (BBA) or Wimlas registered; certified products meet BS 5262:1991, fitted to the Energy Efficiency Best Practice for Homes' Good Practice Guide 293; guarantee ≥ 10 years	BBA or Wimlas registered; certified products meet BS 5262:1991, fitted to the Energy Efficiency Best Practice for Homes' publication External Insulation for Walls of Dwellings; guarantee ≥ 10 years
Electric Tumble Dryers	November 2005	EU Energy Label B for Energy or above	EU Energy Label B for Energy and above. EU Energy Label C for Energy when combined with an automatic drying function
Energy Saving Mains Controllers	November 2005	Automatic switch off of desktop computer peripherals when computer is switched off with ≤ 1 W power consumption in standby mode.	Automatic switch off of desktop computer peripherals when computer is switched off with ≤ 1 W power consumption in standby mode and conformance with BS 1363-2:1995 and BS 5733:1995.
Oil Boilers	February 2006	SEDBUK band B or above	SEDBUK rating of A. Manufacturers must make a commitment to contribute sales figures of endorsed boilers into a bonafide industry led data collection scheme.
Retrofit Cavity Wall Insulation: mineral wool & polystyrene beads	February 2006	BBA Certified; materials must meet BS 5617 and BS 5618 and a guarantee ≥ 10 years	BBA certified conformance with BS 5628-3:2001 BS 8208-1:1985 BS 8000-3:2001 and BS 476-4:1970. Products must be accompanied by an independent 25-year guarantee against defects in workmanship and materials

Source: Energy Saving Trust [16]

Working Relationships and Partners

The Energy Saving Recommended scheme benefits greatly from a networking organisation which aims to bring together all industries and social groups involved in the energy efficiency sector in the UK. The Energy Efficiency Partnership for Homes [17] is a network of approximately 380 organisations in the UK. The Partnership's 17 sector working groups, including one for each of the industrial sectors (e.g. white goods, lighting etc) meet on a quarterly basis and provide an ideal basis in which to communicate with the industry and receive feedback on new product endorsement and the review of existing endorsement criteria.

The Market Transformation Programme (MTP) [18] provides sector specific technical expertise and a linkage with the Government's sustainable products evidence base, its wider policy network and its modelling capacity. MTP made a significant contribution to the revision of dishwasher, tumble dryer and gas central heating control criteria in the financial year 2005/6.

The third area of third-party involvement in the Scheme is the independent peer review provided by the Endorsement Panel. The Endorsement Panel is a body of independent experts from a variety of fields including regulatory, policy, consumer support, certification and environment. The Panel meets on a quarterly basis to advise the Energy Saving Trust on the management of the Scheme and in particular considers and issues recommendations on the endorsement criteria proposals presented to them and on the general management of the Scheme.

Finally, the Energy Efficiency Commitment will be utilising the product certification processes within Energy Saving Recommended to set the benchmark for Integrated Digital Televisions supplied to consumers under the Commitment. The Energy Efficiency Commitment is a requirement placed on UK energy suppliers to achieve defined energy savings by funding energy saving measures in the home. It is operated on behalf of the Department for the Environment, Food and Rural Affairs (Defra) by the energy regulator – the Office of Gas and Electricity Markets (Ofgem).

Future Direction on Standards

An important output of the standard-review process is the mapping of future standards of endorsement for the product groups. The aim is to inform the industry on where standards might be in one, two or three years' time to enable them to factor these standards into the product design and manufacturing process.

Evaluation

The impact of Energy Saving Recommended is evaluated both through an annual survey of the trade sector and consumers, providing information on both its usefulness as a marketing tool for installers, builders, architects and other suppliers, and an assessment of its role in consumer purchasing decisions. The Energy Saving Trust has also conducted in-depth interviews with manufacturers, retailers and builders' merchants to evaluate their views on the effectiveness of the label. The results of two evaluation studies – the Customer Evaluation Study 2004-5 and the monthly consumer awareness evaluation reports – are summarised below.

Methodology

With regard to the customer evaluation study, nearly 5000 consumers were included in the survey and were interviewed via the telephone. The consumers were broken down into four groups:

- Consumers who had contacted the Energy Saving Trust via its national network of 52 Energy Efficiency Advice Centres, EEAC (1851);
- Consumers who had contacted the Energy Saving Trust through its telephone hotline (400);

- Consumers who had contacted the Energy Saving Trust through the Energy Saving Trust website (239); and
- The UK general public (2339), a proportion of which had purchased a kitchen appliance in the previous 12 months (1164).

All interviewing was conducted in four distinct waves between November 2004 and September 2005. Each wave was timed to allow EEAC, Hotline and web customers between three and five months to have taken some form of action as a result of the contact they had had with the organisation.

The Energy Saving Trust undertakes monthly surveys to assess public recognition of the Energy Saving Recommended label. This information is broken down further to assess recognition levels between different sectors of society, based on a pre-determined consumer segmentation model. Approximately 2000 consumers are interviewed every month and are shown various images and are asked whether they recognise the Energy Saving Recommended label. The results of the evaluation exercises are presented below according to the indicators for measuring the effectiveness of EPIS as proposed by the U.S. EPA [7].

Results – Consumer Awareness of Energy Saving Recommended

Table 6 illustrates the results from the evaluation exercises into consumer awareness of the Energy Saving Recommended label. The Energy Saving Recommended label achieved recognition rates exceeding 20% in all but one month, with a maximum rating of 27% in September 2005. The average recognition rate over the period was almost 22%.

Recognition of the Energy Saving Recommended Label: UK General Public (Table 6)

Timeframe	Awareness (%)
August 2005	21
September 2005	27
October 2005	16
November 2005	21
December 2005	20
January 2006	25

Source: Energy Saving Trust [19]

The results from the customer evaluation study presented in table 7 demonstrate higher levels of awareness of the Energy Saving Recommended label. It should be remembered that the majority of these customers have had some interaction with the Energy Saving Trust; but it is interesting to note the high level of recognition from the general public who have neither purchased an appliance nor had interaction with the Energy Saving Trust. Unlike the results in table 6, the interviews were conducted over the telephone and not face-to-face; the first set of results was aided with images whilst the second set was unaided.

Recognition of the Energy Saving Recommended Label: Energy Saving Trust Customers and the UK General Public (Table 7)

Customer Group	Awareness (%)
EEAC customers	56
Hotline customers	62
Web customers	77
UK general public	54
- (Appliance Purchasers)	70
- (Non Appliance Purchasers)	46

Source: Energy Saving Trust [20]

Results – Consumer Trust in Energy Saving Recommended and Changes in Consumer Behaviour

Using the information from the customer evaluation study and presenting the information according to customer type, table 8 shows the proportion of customers who purchased an appliance as a result of the presence of the Energy Saving Recommended label.

Purchase of an Appliance as a Result of the Energy Saving Recommended Label (Table 8)

Customer Group	Proportion of Respondents (%)
EEAC customers	10
Hotline customers	17
Web customers	21
UK general public	10

Source: Energy Saving Trust [20]

Focusing in on the UK general public group from table 8, table 9 presents a breakdown of the role of the Energy Saving Recommended label in the purchasing process.

Energy Saving Recommended in the Purchasing Process: UK General Public Group (Table 9)

	Proportion Buying an Appliance (%)	Proportion of Buyers that Looked for the Label (%)	Proportion of Purchased Appliances that were Labelled (%)	Proportion who would not have Bought without the Label (%)
UK General Public	33.3	43	65	10

Source: Energy Saving Trust [20]

33.3% of the sample had bought an appliance in the last 12 months. Among those who had purchased, 43% reported that they either looked for or asked about the Energy Saving Recommended label, while 65% of purchasers reported that they actually bought an Energy Saving Recommended appliance (i.e. more reported that they had actually bought an Energy Saving Recommended appliance than had actively looked for the label). Overall, 10% reported that they bought an Energy Saving Recommended appliance and would not have bought that appliance had it not been labelled. The results from this evaluation study were derived from telephone interviews; they were not validated by for example performing a home visit to verify actual purchase of product.

In relation to savings calculations, the key figures are the proportions that bought an Energy Saving Recommended appliance and would not have bought that appliance had it not been for the label. For 10% of the general public, the ESR logo was a 'must have' criterion for the purchase of the appliance amongst the other criteria that purchasers are known to have e.g. cost, size etc.

Results – Improvements in Environmental Quality

From the action taken above, it is possible to calculate the impact on individual households, in terms of money saved on household bills as well as energy and carbon saved per home. Table 10 outlines the savings for each of the three customer groups and the general public as a result of their reported contact with the Energy Saving Trust and associated purchase of an Energy Saving Recommended appliance. The estimated savings are derived from the actions reported in table 9, which were not validated in the home.

Developments in 2005-6 Evaluation

The evaluation methodology is reviewed on an annual basis to incorporate changes in the scope and criteria for Energy Saving Recommended and to reflect the increased understanding of the use of the

label across all audience groups. In 2005-6 the consumer survey was amended to reflect the influence of Energy Saving Recommended on the purchase of windows, boilers, CFLs and dedicated low energy luminaires.

For all of these, like the appliance scenario, we ask whether the consumer is aware of the label, whether they looked for the label, whether the installer or retail/sales staff told them about the label, whether they purchased an Energy Saving Recommended product and whether they would still have bought that product if it did not have the label on it. The final question is the main criterion for attribution of carbon savings.

Estimated Financial, Energy and Carbon Savings Derived from the 2004-5 Consumer Evaluation of the Energy Saving Recommended Label's Impact on Appliance Sales (Table 10)

Customer Group	Sample Size	Total in each group 2004-5	Financial (£) Per Home Per Year	Energy (kWh) Per Home Per Year	Carbon (kg) Per Home Lifetime*	Total Carbon Savings (tonnes) Lifetime
EEAC customers	1,851	919,422	0.86	12.90	22.64	20,816
Hotline customers	400	12,115	1.60	23.30	41.27	500
Web customers	239	217,898**	2.66	39.90	70.82	15,432
UK general public	2,339	15,488,117	0.47	7.06	12.53	193,999
TOTAL	4,829					230,746

Source: Energy Saving Trust [20]

*savings over the lifetime of the appliance – assumed to be 15 years for all appliances.

**The web sample is collected through an internet pop up therefore it is a self selecting sample that is estimated to be representative of only 60% of users. Total results are therefore adjusted appropriately.

Notes: It has been considered that all General Public savings overlap with savings from other channels. Furthermore, it is considered that the survey over-estimates by double; thus figure has been halved to reflect a conservative approach.

Monitoring and Compliance

The Energy Saving Trust undertakes compliance testing on Energy Saving Recommended products in order to ensure that they meet the criteria to which they are certified. This testing occurs on two levels. Firstly, a contracted test house assesses compliance with the product performance criteria and secondly, products are assessed for correct usage of the Energy Saving Recommended label. The guidelines for the correct use of the label are specified within the Scheme Rules and are applicable to all product categories.

As was noted above, conformity assessment for some product groups is based on self-declaration and without a visible product testing programme, this method of verification could be open to abuse. The Scheme has an objective to compliance test 5% of certified products every year. Recently, and where budgets allow, the Scheme has aimed to achieve the best possible confidence interval between the test sample and the population from which it is drawn. The aim of this is to ascertain the best possible indicator of the performance of the population as a whole.

If a product fails a compliance test, manufacturers are given the opportunity to comment on the result, which could lead to a challenge. If a manufacturer does not contest the result, or if the challenge is unsuccessful, the product will be deregistered. Non-attributable results are circulated to stakeholders.

Recent testing of 19 Energy Saving Recommended white goods resulted in 3 failures. Out of five cold appliances, four passed. Out of 11 dishwashers, nine passed and all three washing machines passed. The cold appliance was de-registered and the two failed dishwashers had already been de-registered

following the uplift in standards, which took effect part way through the testing. Testing is currently underway on boilers and luminaires.

The Energy Saving Trust carries out monitoring on the use of the Energy Saving Recommended label. As well as two current projects assessing label usage in particular product groups (gas central heating controls and white goods), monitoring exercises are also carried out on a more general basis on-line, in store and in the press. One day per month is allocated to on-line and in-store checks, and all press cuttings referencing the Energy Saving Recommended label in the UK are collected by a third party and forwarded for assessment. Persistent misuse or unauthorised use of the label will be referred for legal action.

Conclusion

The Energy Saving Recommended labelling scheme was established to respond to concerns over increasing consumer energy use in the home and its associated environmental impact. By reviewing the literature and standards for labelling from contributors including ISO, British Standards, U.S. EPA, the European Commission and UNEP, it has been possible to assimilate principles, classifications, operating methodologies and measurement indicators for EPIS. This has been applied to Energy Saving Recommended and allowed the benchmarking of the Scheme. Table 11 utilises the indicators of effectiveness for EPIS published by UNEP for Energy Saving Recommended.

Quantifiable and Qualitative Indicators of Effectiveness (Table 11)

Indicators of Effectiveness: Quantifiable Performance Data	
The number of product categories	19
The frequency of criteria upgrade	9 from 19 in the last 12 months
The number of:	
➤ Manufacturers & Suppliers Certified	96
➤ Retailers Certified	32
➤ Products Certified	1706
Indicators of Effectiveness: Qualitative data on the Credibility of the Label	
The names and types of organisations who have endorsed, supported and helped develop the label:	Defra, MTP, Ofgem, Trading Standards, Environment Agency, Energywatch, Asta Beab Certification, the members of the Energy Efficiency Partnership for Homes and the manufacturers, suppliers and retailers certified under the Scheme.
Complementarities with other policy initiatives	Energy Efficiency Commitment; Defra's Product Compliance Working Group;

Source: Energy Saving Trust [16]

Four key working principles have helped drive the Scheme forward since its launch in 2000: developing and maintaining working relationships with industry, government, European partners and with environmental, policy and regulatory peers; the thorough standard setting and review process; the provision of future directions on standards; and achieving the status of certification mark for the Energy Saving Recommended Label. Whilst it has been recognized that influencing consumers is important, the vehicle Energy Saving Recommended provides for standard setting, review and uplift ensures that product energy performance continues to improve. The importance of integrating Energy Saving Recommended with the initiatives of wider product policy in the UK and abroad has been demonstrated; it will continue to be important to develop these good linkages, to share experience and ensure the effectiveness of the scheme in helping to build markets for the most energy efficient products.

The future direction of the Scheme has been shaped by the outputs from a benchmarking exercise performed by SGS Certification against the principles and standards for operating an environmental labelling scheme contained within ISO 14020 and 14024. Areas for Scheme development include building in product life cycle considerations and improving public reporting and transparency.

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