

YAECI – Yearly Appliance Energy Costs Indication

Abstract

The main objective of the YAECI [1] project is to provide customers with information at the point of sale on the yearly running cost of products with an energy label, in order to stimulate the uptake of affordable efficient products.

The EU energy label currently provides the consumer with information on the energy efficiency (energy class), energy consumption and several other energy-related aspects. However, the energy label lacks the information on an aspect that many consumers find very important i.e. the product's (yearly) running costs. As is well known, a product that is initially somewhat more expensive can in fact work out to be cheaper in the long run due to the running costs being less expensive.

The calculation for the running costs of the YAECI project is based on the following data for each participating country:

1. (average) cost per kWh based on the national electricity prices
2. data on the product's electricity consumption as included on the energy label.
3. Optionally – water costs, based on data on the label and national average water price.

Retailers, which are participating to the YAECI project, are publishing the data on the products yearly running costs, the "Energy Indicator", at the points of sale to inform their customers so they can choose energy efficient products.

The project is organised by partners in 11 EU countries and has started with the preparatory phase in March 2012 and aims to attract retailers to display the running costs. The YAECI project was initiated as a follow-up to the successful programme "Energie Weter", organised in the Netherlands in hundreds of shops. In individual countries different product groups are covered, white appliances covered by the new energy label and displaying the annual energy consumption being dominant.

Products covered by the YAECI project

For the selection of products, the YAECI project team considered [2] all appliances which are covered by the Directive on energy labelling. The Directive 92/75/EEC and the corresponding implementing Directives cover the following products (hereafter "old label products"):

- Refrigerators, freezers and their combinations;
- Washing machines, dryers and their combinations;
- Dishwashers;
- Ovens;
- Electrical lamps;
- Tumble dryers;
- Air-conditioning appliances.

The Directive 2010/30/EU which amends the Directive 92/75/EEC was adopted in May 2010. On the date of writing, Delegated Regulations were adopted for the following products (hereafter "new label products"):

- Refrigerators, freezers, their combinations and wine storage appliances;
- Washing machines, dryers and their combinations;
- Dishwashers;
- Televisions;

- Tumble Dryers;
- Electrical lamps and luminaires;
- Air-conditioning appliances.

Overall, the number of old label products sold in shops is decreasing and thus becoming less significant for their coverage by future YAECI action. For this reason only the new label products are covered by the YAECI energy indicator. Nevertheless, a methodology which associates the old and new energy labels has been developed for assisting the retailers, in case they prefer to display the energy indicators in all of their products.

The combined washer dryer is the only exception in which an old label product is included since no new energy label has yet been developed for this product category. Ovens and light bulbs and tubes, which are covered by the EU Directives on energy labels, are not included in the selection for the reasons provided below.

Products which are not covered by the EU Directive on energy labelling are not covered by the YAECI project because this would impose difficulties in establishing commonly accepted methodology and in collecting the necessary data from the manufacturers. This difficulty was experienced in the Dutch initiative EnergieWeter which attempted to include a wider range of products (e.g. laptops and computer monitors).

Some aspects related to specific product categories which were considered during the selection process are explained below.

Refrigerators, freezers and their combination, washing machines and dishwashers

The potential impact of displaying an energy indicator on wine refrigerators, which are covered by the new Directive on energy labelling, is expected to be insignificant in all countries due to their relatively low sales (both in terms of units and power capacity). For this reason, wine refrigerators have been excluded from the scope of products covered in this project.

Tumble dryers and combined washer dryers

Tumble dryers and combined washer dryers have been excluded from the YAECI selection in countries with warmer climates. In addition, according to available market data, in some New Member States (including CZ, RO and SI), the market penetration of this type of products is generally much lower compared to the western European countries (e.g. FR and NL). However, the market trends show that the market penetration is increasing rapidly and therefore their inclusion was considered in CZ, CR, RO and SI as well.

The new Delegated Regulation on tumble dryers was published recently and it will become mandatory for all tumble dryers, which are placed on the market after May 2013. For this reason, only new label tumble dryers are included the database which will be developed by the project team to provide data on running costs to the retailers. Nevertheless, a methodology which associates the new and old label for tumble dryers has been developed as well to assist the retailers until no more old label products will be sold.

Ovens

The use of electric ovens is generally higher compared to gas ovens but their share of overall household electricity consumption, is relatively low. In the EU, the market penetration of electric ovens will continue to rise but this will not have any significant impact on the electricity consumption, since the current share of electric ovens is already very high.

Nevertheless, ovens have been excluded for the scope of product covered in this study due to the likelihood of similar difficulties that were experienced in the EnergieWeter initiative. The main difficulties relate to the estimation of the usage patterns which seem to differ considerably not only between different countries but also between households within the same country.

Air-conditioners

The use of air-conditioners in the residential sector is increasing in all EU countries, regardless of the local weather conditions. However, in the short-term the impact of this product will remain rather insignificant in countries with cold climates, because the main driver of the air-conditioners market is the cooling demand (regardless of the fact that some air-conditioners can be used for heating as well).

The new and old energy labels for air-conditioners cannot be correlated because they are based on different classifications and standards. For this reason, no methodology has been developed for old label air-conditioners.

Electrical lamps and luminaires

Usually, the retailers who trade white goods and televisions also sell light bulbs. Nevertheless, this product category has considerably different characteristics compared to other products covered by the EU legislation on energy labelling, limiting the impact of their potential inclusion. Most significantly, due to the small size of light bulbs and their packaging, the energy indicator might not be noticed by the consumers.

Product selection

Table 1 shows the selection of products which is mainly based on the market penetration and trends of different products in each country. Due to their large market penetration, the refrigerators and freezers, the washing machines, the dishwashers and the televisions are covered by all countries. The inclusion of washer dryers, tumble dryers and air-conditioners is excluded in some countries due to their low market uptake. For the reasons explained in the previous section, ovens and light bulbs have been excluded from the scope of analysis performed in this study.

The table also shows which labels are taken into account in the development of the YAEI database of running costs. The combined washer dryers is the only old label product which is included in the database since the new label for this product has not been published yet.

Table: Final YAEI product selection

Product	A	CZ	CR	DE	ES	FR*	MT	NL	PT	RO	SI	Old	New
Refrigerators and freezers **	√	√	√	√	√	√	√	√	√	√	√		√
Washing machines	√	√	√	√	√	√	√	√	√	√	√		√
Dishwashers	√	√	√	√	√	√	√	√	√	√	√		√
Televisions	√	√	√	√	√	√	√	√	√	√	√		√
Combined washer dryers		√	√			√		√				√	√***
Tumble dryers	√	√	√	√		√		√			√		√
Air-conditioners			√		√	√	√		√	√	√		√

* For the present YAEI is not be implemented in France

** Including built-in freezers and excluding wine – refrigerators

*** Not published yet

Calculation of the Energy Indicator

The term “energy indicator” refers to the running cost which will be displayed in shops either within the price tag of the products or separately. The aim of the energy indicator is to provide to the consumers an estimate of the running cost of products. This information is not included in the EU energy labels. The information which is currently displayed in the EU energy labels can assist the consumers to estimate their potential energy savings from more efficient products but not in monetary terms. This poses a risk that the information which is provided in the EU energy label (i.e. energy class and energy consumption) may not encourage consumers to purchase the most performing products.

For the development of YAECI energy indicator, the project team assessed different options covering the following 4 aspects:

- definition of the time frame of the indicator;
- selection of a common or a diverse approach between the participating countries;
- definition of potential presentation standards for energy indicator;
- adding supplementary information.

The selection of the approach for each of these aspects is described below.

The time frame of the indicator

The running cost of products can be calculated on an annual basis or for longer periods (e.g. 5 or 10 years). The project team assessed the option of displaying the running cost of products over their lifetime. In this option, the average lifetime for each product category would be based on a common source of information. Potential sources considered, include the base cases from the Ecodesign preparatory studies which were carried out in the context of the Ecodesign Directive . These base cases serve as a reliable source since they have been developed in consultation with the manufacturers. However, this option was abandoned due to the possibly significant differences between the actual lifetimes of products and the possible opposition by retailers and manufacturers on using one average value for all products.

For this reason, the project team selected the option of displaying the annual running cost which will be mandatory for all participating retailers and all products. This approach has already been applied in a real situation (under the EnergieWeter initiative in the Netherlands) which gives it additional credibility. Nevertheless, the retailers will be encouraged to display the running cost for longer periods without associating those periods with the lifetime of the respective products. The annual cost savings might appear insignificant and therefore the provision of the running costs for a longer period will further encourage the consumers to purchase energy efficient products.

Context and appearance

The context of the energy indicator will be based on EnergieWeter approach. Similar to the Dutch initiative, the YAECI energy indicator will follow the following principles:

- the energy indicator will be presented in the form of the statement “Energy cost per year is € X” (written in national languages and currency);
- in shops, the energy indicator must be set on the price tag (preferable on the last line) and for online sales the indicator will be presented in the product specification;
- the use of the YAECI logo is encouraged but not mandatory;
- the YAECI logo can be displayed on the price tags of the products and on separate tags.

This approach is preferred because of its acceptance by the retailers and also as its effectiveness has already been tested and applied in real life situations under the EnergieWeter initiative.

Use of supplementary information

The project team examined the possibility of including additional aspects of the running cost which could be used as supplementary information of the energy indicator. For this reason, the significance of the share of water consumption to the total running cost was analysed. The inclusion of water consumption was considered as it is one of the key elements included in the EU energy label and is largely related with the environmental impact of products. The products that would be affected by the inclusion of water consumption are the washing machines, dishwashers and washer dryers.

Next Table shows an estimate of costs that was carried out by the project team, for Austria, Malta and Portugal.

Table: Weight of water consumption in washing machines and dishwashers

Countries	Share of water cost in the annual total running cost		Comments
	Washing machines	Dishwashers	
Austria	40- 50%	n.a.	Water cost = € 3.00 per m ³
Malta	40 - 54 %	11 - 20 %	Water cost = € 3.04 per m ³ based on a national avg. consumption of 55 m ³ per person/year
Portugal	28 - 42%	7- 13 %	Water cost = € 1.28 per m ³ based on a national avg. consumption of 120 m ³ /year

Depending on the specific models used for the estimation of the weight of water ranges between 28%-54% for washing machines and 7%-20% for dishwashers. The washing machines models used in the calculations for Malta and Portugal were the same but not for Austria where different models were applied.

Concerning washer-dryers, according to an estimate based on the performance of 4 units sold in France, the share of water cost ranges between 21%-39%. The share of water consumption is significant in this product category because most washer-dryers have a condensation-based drying function which uses cold water to cool down the drying process. In fact, the lower value (21%) of the range above, refers to an air-vented appliance whereas the share of water consumption in the other three models which use water in the drying process, ranges between 33%-39%.

At least for the washing machines and washer dryers (especially the water-cooled units) the cost of water represents a significant share of total cost. Although the weight of water consumption is not as significant in dishwashers, it would still be reasonable to include the cost of water, to ensure consistency on the overall approach.

Overall, the benefits of including the cost of water consumption are the following:

- water represents a significant share of the total running cost for some products (e.g. in washing machines the share ranges 28%-54%);
- the water cost is included in other similar initiatives (e.g. in France);
- the water consumption is included in the EU energy label.

Following are the main disadvantages of including water consumption:

- potential difficulties might arise in defining a representative average cost for the water consumption (e.g. differences between municipalities/ regions and at different levels of consumption);
- the inclusion of water might cause difficulties for the evaluation of the YAEI action since this will be largely based on the share of products per energy class.

Therefore, although the water consumption represents a significant share in the total running cost of certain product categories, it also poses several challenges which relate mainly to the definition of a

representative average water price. For this reason, the running cost of water consumption is not mandatory in the YAECI action but it will be supported by YAECI if this is requested by the retailers.

Approach on the energy indicator

Based on the analysis of different options for the definition of the energy indicator the mandatory principles that should be followed by all retailers are the following:

- the annual running cost must be displayed in all shops and products;
- the annual running cost will be presented in the form of the statement “Energy cost per year is € X”.

Non-mandatory, but desirable principles are the following:

- the energy running cost for a different number of years (e.g. 5 and/or 10 years) may also be displayed as supplementary information;
- retailers may display the YAECI logo in the tags which will include the energy indicator.
- Another optional element is the following:
- retailers may include the running cost for water consumption calculated based on the methodology provided by YAECI.

Methodology for the calculation of the running costs

This chapter describes the methodology for the calculation of the annual running costs for products selected in YAECI project. For all product groups which are displayed with the old and new EU energy label, two different formulas have been developed (except for air-conditioners).

The development of the YAECI database takes into account only the methodologies referring to the new energy label (except for combined washer dryers for which only the old energy label exists). The methodologies for these products will be embedded in the YAECI database. All other methodologies have been developed to assist the retailers to make their own estimates, in case they wish to also display the running costs of products using the old energy label.

Refrigerators, freezers and combined units (displayed with the new energy label)

Both the new and the old energy labels indicate the annual energy consumption. In both labels the energy consumption is calculated based on similar standards. The formula for the calculation of the annual running cost is the following:

$$ARC = AEC \times EP$$

Where:

ARC= Annual running cost

AEC= Annual energy consumption per kWh according to the label

EP= Electricity price per kWh

Washing machines (displayed with the new energy label)

The new energy label shows the weighted annual energy consumption which is calculated at 220 cycles per year and takes into account the energy consumption of the following programmes:

- standard 60 °C cotton programme at full load (Et,60);
- standard 60 °C cotton programme at partial load (Et,60½);
- standard 40 °C cotton programme at partial load (Et,40½).

The weighted annual consumption of washing machines also takes into consideration the weighted powers in “off- mode” (P0) and in “left-on mode” (PI).

The formula for the calculation of the annual running cost of washing machines is the following:

AEC= $AEC \times EP$ (this cost figure will be displayed by the participating retailers)
AWC= $AWC \times WP$ (this cost figure might as an extra option be displayed by the participating retailers)
ARC= $AEC + AWC$
Where:
ARC= Annual running cost
AEC= Annual energy cost
AWC= Annual water cost
AEC= Annual energy consumption per kWh according to the label
EP= Electricity price per kWh
AWc = Annual Water consumption (L)
WP= Water price per L

Dishwashers (displayed with the new energy label)

The annual energy consumption of dishwashers is provided in the new energy label. This is calculated based on 280 standard cleaning cycles using cold water fill and the low power modes.

As in the case of washing machines the new energy label for dishwashers also takes into consideration P0 and PI. The formula for the calculation of the annual running cost of dishwashers is similar to the one for washing machines mentioned above.

Televisions

All televisions which were placed on the market after March 2012 should be displayed with the new energy label. Currently there are still some unlabeled televisions on the market but this number is gradually decreasing.

The energy label for the televisions indicates the annual energy consumption and therefore the formula for the calculation of the annual running cost is straightforward:

ARC= $AEC \times EP$
Where:
ARC= Annual running cost
AEC= Annual energy consumption per kWh according to the label
EP= Electricity price per kWh

Combined washer dryers

At the time of preparation of this report, the combined washer dryers were covered only by the old energy label. In relation to the energy consumption, the energy label includes the following information:

- energy consumption per complete operating cycle (washing, spinning and drying) using standard 60 °C cotton cycle with a full capacity wash load and a “dry cotton” drying cycle;
- energy consumption per washing cycle (washing and spinning only) using standard 60 °C cotton cycle.

The energy label also shows the capacity (in kg of cotton) for both the washing and drying functions. The following main aspects in the operation which needs to be taken into account for the calculation:

- consumers do not always use the drying function;
- the drying capacity does not often match the washing capacity and is normally smaller;

For this reason, the calculation of annual energy consumption of washer dryers is relatively more complex compared to other product groups. Consumers might use the drying function more than once for a single load of washing. Alternatively, consumers might prefer to wash loads which match the (normally smaller) drying capacity. There is no information on these specific usage patterns. Based on several assumptions derived from the energy label methodology, ecodesign and Energieweeter the following assumptions have been applied:

- on average the consumers use the washing machine 220 times per year and the tumble dryers 160 times per year.
- for washing machines the average load is estimated at 3.4 kg for those with a capacity of 5.4 kg
- the total number of the wash-only cycles is 58 (200 kg, 3,4 kg in each cycle).
- the 40 °C programme is the most commonly used (63%) followed by the 60 °C one (37%).
- the energy consumption of the 40 °C programmes correspond to the 72% of the energy consumption of the 60 °C programme.
- the actual energy consumption compared to the energy consumption which is included in the label is 87 %.

The formula of the estimation of the annual energy consumption of washer dryers is as follows:

$$AEC = [(160 \times 5.4/C_d \times E_{w,d}) + (58 \times 5.4/C_w \times (E_w \times 37\% + E_w \times 72\% \times 63\%)) \times 87\%] \times EP$$

(this cost figure will be displayed by the participating retailers)

$$AWC = [(160 \times W_t) + (58 \times W_w)] \times WP$$

(this cost figure might as an extra option be displayed by the participating retailers)

$$ARC = AEC + AWC$$

Where:

ARC= Annual running cost

AEC= Annual energy cost

AWC= Annual water cost

C_d= Capacity in the drying function according to the energy label in kg

C_w= Capacity in the washing function according to the energy label in kg

E_{w,d}= Energy consumption per cycle in the washing/ drying function in kWh

E_w= Energy consumption in the washing only function in kWh

EP= Electricity price per kWh

W_t = Total water consumption per cycle in L according to the energy label

W_w= Water consumption per cycle in L in washing and spinning functions according to the product fiche

WP= Water price per L

Tumble Dryers (displayed with the new energy label)

The new energy label on tumble dryers is mandatory for all products placed on the market from May 2013. The new energy label indicates the weighted annual energy consumption which is estimated at 160 cycles per year by taking into account the energy consumption of the standard cotton programme at full and partial loads (Edry and Edry^{1/2}). In addition to the air-vented and condenser tumble dryers, the new energy label also covers gas-fired appliances which are out of the scope of the YAECl project.

The formula for the calculation of the annual running costs of the air-vented and condenser tumble dryers which are displayed with the new energy label is the following:

$$ARC = AEC \times EP$$

Where:

ARC= Annual running cost

AEC= Annual energy consumption per kWh according to the label

EP= Electricity price per kWh

Air-conditioners (displayed with the new energy label)

The old label cannot be associated with the new energy label which becomes mandatory in January 2013. For this reason only products displayed with the new energy label will be taken into account.

The new Delegated Regulation on air-conditioners covers the following types:

- Single and multi split;
- Single duct;
- Double duct.

There are three main types of single and multi split air-conditioners according to which the information provided in the energy label varies. Particularly the specific types and the information provided is as following:

- Reversible air-conditioners – annual energy consumption in kWh per year for cooling and heating. For the heating function, 3 different - geographical zone oriented - values are given.
- Heating-only air-conditioners - annual energy consumption for 3 different geographical zones.
- Cooling-only air-conditioners – annual energy consumption.

Similarly for the single and double duct air-conditioners, depending on the specific type, the information on energy consumption might refer to heating-only, cooling-only or to both heating and cooling functions. A key difference of the single and double duct air-conditioners compared to the single and multi splits is that the hourly energy consumption is indicated. In addition, for the heating function a single value is given instead of 3 zonal values.

The formula for the estimation of the annual energy running cost for split and multi split air-conditioners is the following:

$$ARC = (AEC_{h,x} + AEC_{c}) \times EP$$

Where:

ARC= Annual running cost

AEC_{h,x} = Annual energy consumption in the heating function per kWh according to the label, in the respective heating season

AEC_c= Annual energy consumption in the cooling function per kWh according to the label

EP= Electricity price per kWh

For the single and double duct air-conditioners the formula is as follows:

$$ARC = [(HEc,h \times HUh) + (HEc,c \times HUc)] \times EP$$

Where:

ARC= Annual running cost

HEc,h = Hourly energy consumption in the heating function according to the label

HEc,c = Hourly energy consumption in the cooling function according to the label

HUh = Annual hours of use in the heating function, defined by partners

HUc = Annual hours of use in the cooling function, defined by partners

EP= Electricity price per kWh

Definition of data per country

The calculation of the running cost is based on data which is mostly provided by the EU energy label, but certain parameters are defined by the project team. Specifically, the following data needs to be defined:

- energy prices per country;
- water prices per country (optional);
- usage patterns of single and double-duct air-conditioners (applicable in CR, ES, FR, MT, PT, RO and SI).

The data for each of these categories and their sources are described in the sections below.

Energy prices per country

Table 4 shows the household energy prices in all countries represented in YAECI. These prices come from Eurostat and they refer to the first semester of 2012 and will be updated at the beginning of the YAECI action. These prices include all taxes and they are charged in direct current (DC) bands for annual consumptions between 2,500 and 5,000 kWh;

Table: Energy prices per country (average of the first semester of 2012)

Country	Energy price €/KWh
AT	0.1975
CR	0.1208 (0.9109 kn)
CZ	0.1497 (3.7700 CZK)
DE	0.2595
ES	0.1822
FR	0.1412
MT	0.1700
NL	0.1858
PT	0.1993
RO	0.1050 (0.4612 lei)
SI	0.1542

The project team also examined the possibility of obtaining data from national sources (e.g. statistical offices, energy agencies) and for this purpose information was collected as well from such sources. Although national authorities and statistical offices often provide more up-to-date data, Eurostat was selected as the most appropriate source, due to the differences that exist between countries in the

definition of characteristics which relate to the electricity prices (e.g. corresponding bands and inclusion of taxes). In this context, the use of data from Eurostat can ensure consistency throughout the whole duration of YAECI.

Water prices

The inclusion of the cost of water consumption as a supplementary information to the energy indicator is optional. The inclusion will be based on the height of water prices at the national, regional or local levels and on the preferences of the participating retailers. Table 5 shows the average water prices per m3 in 7 countries covered by YAECI. These prices are either provided by national statistical sources (CZ and FR) or they have been estimated based on average prices from various suppliers. In addition, these estimates entail the following three aspects:

- the prices correspond to an annual consumption of approximately 120 m3/year;
- they reflect costs of both water supply and sewage;
- any extreme cases (i.e. particularly high or low prices in certain regions) have been excluded.

Table: Water price per m3

Country	Water price €/m ³	Source
CR	1.52 (11.33 kn)	Estimate
CZ	2.92 (73.44 CZK)	CZSO
FR	1.73	INSEE
MT	3.20	Estimate
PT	1.28	Estimate
RO	1.29 (5.86 lei)	Estimate
SI	0.66	Estimate

Involving retailers and endorsement

Retailers are the key actors in this action. They have to provide the information on the yearly energy costs at the point of sale and in advertisements. They benefit from clearly demonstrating their environmental commitment and by attracting consumers to more efficient products that may be (somewhat) more expensive but can generally also provide a higher margin.

The participation of retailers is an essential part of the action. Each project participant (in 10 countries) is expected to ensure in writing the participation of at least 1 national retailer chain with at least 7 participating retailers and 8 individual retailers or 2 national retailers with at least 7 participating retailers or at least 15 individual retailers.

The list of retailers actually cooperating with the YAECI programme at the moment of writing this paper is already beyond expectation. Besides the 1400 retailer participating in EnergieWeter in the Netherlands several hundreds of shops in the other participating YAECI countries have committed themselves to the project. Amongst them big retailer chains and web shops which will be visible at the YAECI website www.appliance-energy-costs.eu. The actual date of the launch of the visibility in the shops for the consumers of the YAECI Energy Indicator will differ from country to country and will take place in the 2nd quarter of 2013.

Retailers are understood to benefit by joining the scheme, since they will have an extra selling tool to attract the attention of the consumer and have stronger arguments to sell (sometimes) more expensive products.

A priori, manufacturers/suppliers would provide the energy and water consumption figures of their appliances to the YAECI database. The YAECI consortium developed this European database which

extends the Dutch “Energy Indicator” database containing already 4600 products of 40 brands from the start. During the project it had been decided to subcontract a service provider the consortium helping with the data gathering.

The Dutch version of the Energy Indicator was created in 2010 in cooperation between the Ministry of Environment, several appliance suppliers/importers and the association of contracting installing companies and technical retailers in the Netherlands (UNETO-VNI). The YAECI consortium members foster a similar cooperation and support in the participating countries beyond the Netherlands. [3]

Evaluating results

Evaluating the impact of the project activities is one of the keys to understand if projects such as YEACI have the potential to further improve the position of energy efficient appliances on the market. A specific project activity provides both an evaluation of the market effect of the action and how the action was received by retailers and consumers. The evaluation of the action has 3 components:

- a quantitative evaluation at the end of the action answering the question whether the market share of more efficient appliances has increased for retailers that participated in the action,
- a qualitative evaluation of the action regarding consumers,
- a qualitative evaluation of the action regarding retailers.

The qualitative evaluations regarding consumers and retailers are foreseen half way the action. In this way the results of the qualitative evaluations can be used to guide and, if necessary, further improve the approach of the action in between (mid term evaluation) whereas the quantitative evaluation aims at assessing the maximum result possible.

Description of the tasks

Preparation of the evaluation

The preparation already starts at the beginning of the project; defining the type of information required to be collected from individual retailers. The following table illustrates the information to be collected from participating retailers.

Table: Information to be collected from individual retailers

Please enter below the overall sales data per product group within the time period indicated above						
	Overall Sales		If you do not wish to give the exact number of sales please indicate the range of sales numbers by crossing below the suitable section			
Productgroup	Number of sold appliances [pieces]		0-100 pieces	>100-250 pieces	>250-500 pieces	>500-750 pieces
Refrigerators						
Freezers						
Fridge-freezers						
Washing machines						
Dishwashers 60cm						
Dishwashers 45 cm						
Televisions						
Combined washer dryers						
Tumble dryers						
Air-conditioners						

Qualitative evaluation consumers

Based on a questionnaire template, the evaluation regarding consumers is done by interviews directly at the Point of Sale (target group: consumers that bought some appliance for which yearly energy cost data was displayed). By few initial questions, the customers are asked if they agree participating in the interview. The more detailed interview will be done directly at the PoS or soon afterwards by a telephone interview. In each country at least 15 personal interviews with consumers are done. Per country a short evaluation report is produced being part of the overall evaluation report. This report is sent to representatives from national consumer organisations (if available) in order to ask for their opinion and discuss their further support for the action.

Qualitative evaluation retailers

In this task the evaluation of the action regarding retailers is carried out in each country. Each participating chain or retailer is interviewed based on a questionnaire template. The evaluation will include information about the promotional activities taken from their side, and the feedback and possible challenges during the sales conversation on the side of consumers regarding their purchasing decisions. Per country a short evaluation report is produced being part of the overall evaluation report.

Quantitative effect of the action

Before the start of the action, participating retailers in each country have to be instructed which kind of market data have to be prepared and collected (market share of more efficient products (to be defined as the products to be in the one or two most efficient energy classes) compared to less efficient products).

Data is acquired at the beginning of the action (before the actual providing of information on the yearly energy costs started), after 18 months and after 32 months of the action. If publicly available, this data is compared to a base line of data from the total national market (desk research). Per country a short evaluation report is expected to be produced being part of the overall evaluation report.

Evaluation report

By disclosing annual running costs on appliances at the point of sale, a new methodological approach of consumer information and motivation to buy efficient appliances will be tested and evaluated in a representative selection of EU countries.

Promoting the project activities

Promoting the yearly appliance costs to consumers is one of the key conditions of the success of the programme. Within the programme, each national partner is expected to organize a range of activities, most of them in direct cooperation with the participating retailers. Examples of the promotion activities include:

- Project website, with national language sections for 11 participating countries
- Brochures for shop assistants and consumers
- Leaflets and/or posters for consumers
- Press conference (including press release) and seminars
- Articles in general media

Activities already undertaken within the project are regularly published on the project website:

<http://www.appliance-energy-costs.eu/eu/news/>

References

- [1] YAECI project website: www.appliance-energy-costs.eu
- [2] Mudgal S., Mitsios A.: *YAECI – Approach, methodology and data per country*. December 2012. Can be downloaded from: <http://www.appliance-energy-costs.eu/eu/news/yaeci-project-approach-methodology-and-data-per-country-defined-news>
- [3] UNETO-VNI: Van wens naar winkelvloer – Report Energieweter 2010-2012. www.energieweter.nl



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