



## Energy Efficiency Solutions

### Electric appliances with high energy efficiency rating

#### General information on the solution —

##### “Targets”:

- Hotel area: General
- End-use: Laundry, kitchen and office applications.

##### Related criteria of the EU Eco-label:

The use of energy efficient refrigerators, ovens, dishwashers, washing machines, dryers/tumblers and office equipment is an optional criterion of the EU Eco-label (criterion #43).

##### About its implementation:

- Ease: Easy (\*).
- Best moment: when replacing electric appliances.
- Relevant initial situation: some of the electric appliances that the hotel uses (for catering, laundry, office...) do not have a high energy efficiency rating.

##### Indicative cost:

- Varies.

##### Indicative return on investment time:

- <1-8 years

*Note that costs and return on investment may vary greatly depending on the local context and on the hotel's initial situation.*

#### Description of the solution —

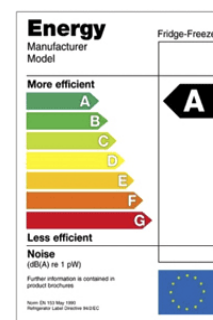
##### Principle

If you want to replace or upgrade your old appliances and electronic products in your hotel, make sure that you choose a product with a high energy efficiency rating.

European energy labelling (introduced by the Council Directive 92/75/EEC) is available for most household electric appliances, in particular for:

- catering equipment (refrigerators and freezers, mini-bars, dishwashers),
- laundry equipment (washing machines, dryers...).

Energy efficiency is expressed in terms of energy class, ranging from **A to G**. Class A corresponds to the optimal level of efficiency, while class G is the less efficient class.





Using **catering and laundry equipment** with a high energy efficient rating (class A, A+ or A++) is particularly important considering that these services account for a considerable share of energy consumption in hotels (catering may represent as much as 15% of energy consumptions, for instance).

For **office equipment** (computers, faxes, printers, scanners, photocopying machines), the Energy Star label can be used as a reference.



Other **energy labels** may be used. In the U.K., for instance, you can look out for the Energy Saving Recommended logo. This logo is awarded to products that meet strict criteria on energy efficiency. It endorses over 3,000 different products – such as washing machines, dishwashers, lighting, televisions and DAB (digital) radios.



### Recommendations

#### How to proceed?

- A **first step** is to identify all household equipment in the hotel. It is recommended to list and document them. This information should include information about the energy label, brand, year of purchase, load and operating hours.

- In a **second step**, the hotel should identify which equipment is to be replaced, and make sure that new equipment purchased has a good energy rating.

#### Caution

- Be aware that if you are replacing a piece of equipment by a more efficient one while upgrading the associated service (for instance, if you switch to a fridge with a larger capacity), the energy savings may be a little compromised.

#### What else can my hotel do to reduce the electricity consumption of electric appliances?

- You need to check that your electric appliances are correctly used, and that they are switched off when not in use (TV, DVD, Hi-fi...).
- Stand-by modes can be responsible for up to 70% of the consumption of an electric appliance. That is a waste of energy which you can limit by encouraging your staff and your guests to adopt good housekeeping practices.
- You may also introduce a towel and sheet policy in your hotel to limit the use of laundry equipment (which is a big energy consumer).

Also, remember that most equipment needs to be maintained regularly to work properly (refrigerators, freezers, washing machines, etc.), otherwise energy can be wasted. For instance, a washing machine that is not maintained can use 10% to 20% more than a well-maintained one.

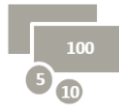
#### Link with others database

While solution n°XIV (**electric appliances with high energy efficiency rating**) is focused on laundry, kitchen and office applications, it is also important to consider the energy efficiency rating of other types of equipment, in particular: **lights** (solution n°XIII), **boilers** (solution n°XVII) and **space cooling equipment** (solution n°XIX).





## Benefits for the hotel



### Cost reduction

#### Energy saving

Electric appliances with a high energy efficiency rating are usually a high-return, low-risk investment.

*Potential energy saving associated with the use of electric appliances: up to 50%.*

## Benefits for the environment

# CO<sub>2</sub>

### Carbon emissions reduction

For a 1,000 m<sup>2</sup> hotel with an annual energy consumption of 40 kWh/m<sup>2</sup> for electric appliances, and if the French emission factors are applied, a 50% energy saving represents:

**1.69 teq CO<sub>2</sub> avoided each year**

French emission factor for electricity: 84.3 gCO<sub>2</sub> / kWh.

French emission factor for gas: 231 gCO<sub>2</sub> / kWh

(Source: ADEME).

## Market availability

### Maturity of the solution

- European energy labelling was introduced in the 90s and is now a well-established label.

### Manufacturers and suppliers

No specific manufacturer or supplier to mention (all products that are in the scope of the European energy label must display their energy rating).

### Main labels

EU energy label:

[www.energy.eu/focus/energy-label](http://www.energy.eu/focus/energy-label)

Energy Star:

[www.energystar.gov](http://www.energystar.gov)

Energy Saving Trust:

[www.energysavingtrust.org.uk](http://www.energysavingtrust.org.uk)

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