





Solar thermal solutions within the Energy Labelling

Energy labelling promotion & market surveillance

Place, Date



The professional who places the product or the package on the market is responsible of editing the energy label and the related documentation. Nevertheless all the professionals in the market chain, particularly those who will be in contact with the end user, are responsible for the promotion of the energy label.

It will be the installer's responsibility to ensure that the customer has received the energy label, and additional documentation of the heating appliance, at the point of sale.

But, in its showroom, or during fairs, manufacturers, dealers or installers have to affix the label on the outside of the front of the appliance, in such a way as to be clearly visible.

If the product can not be displayed to the end consumer before buying, he should received a detailed information on the product or package.

Detailed information are listed in the regulation: 811-2013, Annex VI; 812-2013, Annex VI



At the point of sale, the seller should be able to explain the label to endconsumers and help them to choose a solution according to their needs.

- Present different solutions which fit the consumer's needs, based on the estimated load profile in case of a water-heater and the heating needs in case of space heating solutions;
- Present the energy efficiency differences between solutions, namely translating those differences in terms of annual savings in the energy billing;
- Inform the consumer of the exact energy efficiency depending on the region (i.e. average, colder, warmer climate conditions);
- Use flyers and other materials made available by the Commission, the Label Pack A+ project and professional associations, such as the national solar associations.



How to estimate the savings of a new system on the basis of the energy label?

<u>Space heating equipment</u>: the energy label presents the rated heat output in kW. Information requested for savings estimation:

- Number of hours the equipment is expected to be used per year.
- Current energy bills for space heating (with the mention of output in kW).

<u>Water heaters</u>: the energy label present the expected annual electricity consumption per year in kWh and/or the annual fuel consumption in GJ, according to the load profile for witch the equipment was tested.

Information requested for savings estimation:

- Current contracted electricity tariff by the consumer.
- Current energy consumption for water heating.



How much more efficient an A++ or an A+ product or package is than an A one?

Class A is already very good, why choose a A+ or A++?

Recent research in the field of household refrigerators identified a common perception that an A+++-label is only marginally better than an A-label.

However, this is not the case, as an A-label refrigerator consumes over three times as much electricity as an A+++-class.

This order of magnitude of difference between a common and the highest label class is also the case for solar thermal products

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How to achieve higher efficiency classes in space heating?

In packages, space and water heater are test separately.

For space heater efficiency, the solar system adds to the energy efficiency of the backup space heater.

The main influencing parameter in space heater efficiency is the backup and its output power. The higher he is, the lower will be the solar device contribution to needs, and the lesser will be the effect on the global energy efficiency.

Then, based on a high performance condensing boiler:

- A+ is certainly reachable only by adding a solar device,
- A++, only with a small rated output of the boiler(low energy house)
- A+++, only by adding to A++ case a correctly design and dimensioned to needs solar device





How to achieve higher efficiency classes in space heating?

If the boiler has a B class, the A class could be reach through a package by adding a solar device, even if switching from B to A involved an 8% threshold to be compensated.

In order to reach high label classes for packages, the following recommendations apply:

- Combine the solar device with a space heater with a low rated heat output,
- Combine a correctly dimensioned solar device to best match heating needs (collector area and storage volume),
- Use a glazed or vacuumed collector,
- Combine a storage tank with highest energy efficiency class.

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How to achieve higher efficiency classes in water heating?

In order to reach a high efficiency class in water heating, the solar contribution has to be maximized, considering water heating needs.

Some advices could help in maximizing the efficiency of the water heating process:

- Focus have to be set on energy efficiency of the back-up water heater and the solar fraction.
- The solar fraction have to be maximized: above 50%, top of class could be easily reached.
- Solar device added to a low class back-up water heater is a good decision to raise the label class to a higher value. As example, an electrical water heater, classified E could be upgrade with solar device and reach a A level.
- If the back-up water heater has a high efficiency (A), adding a well dimensioned solar device in a package frame could rise the efficiency to A+++.



Energy labelling: added value for the end-consumer

Energy labels help consumers choose energy efficient products and adequate their needs to the best market offer.

By choosing energy efficient products, end-consumers:

- directly impacts their energy bill,
- reduce theirs bills related to the use of their equipment;
- could calculate how much the option for a higher class equipment will represent in terms of billing savings.



Market surveillance

In each member state, a market surveillance authority will be in charge of verifying the application of the regulation.

This authority will be responsible for

- economic surveillance activities,
- monitoring the enforcement of the regulation,
- preventing the misappropriation of legal acts.

Concerning the energy labelling, it's mission will be to:

- assure the presence of the energy label in the equipment at the moment of sale,
- verify the format of the label,
- assure that the right label is provided to the final consumer.



Market surveillance

There are some specificities for package labels:

This authority will only be able to:

• access and verify the compliance with the legal requirements regarding complete packages available on the market.

As the process to verify the compliance with the directive in the cases where the installer assemble the system in the final consumer's house, is still unclear, the surveillance entities do not have a direct way to validate if the consumer was informed of the package's energy class and if the customer received all the compulsory documentation.

However, the consumer has to be informed and receive this documentation.

He should ask for it to the installer before signing the deal.