

## Grey energy and use energy : to distinguish them is necessary. A

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As its name suggests it, the grey energy is the quantity of energy « hidden » in a product.

We have found the following definition on the well known website: [http:// fr.wikipedia.org](http://fr.wikipedia.org)

The grey energy is equivalent to the sum of all necessary energies for the production, for the **use** and finally to the recycling of the material or industrial products. Theoretically, the assessment of the grey energy sums the consumed energy at the time of:

- the conception of a product ;
- the extraction and the transport of raw materials ;
- the transformation of raw materials ;
- the production of the product ;
- the marketing of the product ;
- the use or the implementation of the product ;
- the maintenance, the reparation, the dismantling of the product ;
- the recycling of the product.

Actually for some products, the energy of **use** represents a small part of the assessment.

Examples :

- Sheet of paper recycled or not.
- Glass or plastic bottle.
- Metal tin.

For these products, what must we take into account to evaluate the energy required for their use? It is difficult to answer. You could define a standard use of the product and associate it to some energy consumption.

For other products, the energy required for their use becomes weighty. This energy of use can represent a main part of the life cycle.

Examples :

- electric bulb ;
- computer ;
- car.

Thus, it would be useful to distinguish the grey energy from the use energy: the first one evaluates the energy "contained" in the product, the second one is the energy required to make it function; this last one depends on the user and his/her behaviour.

Furthermore, during their use, some products don't consume any energy, but they allow to save it.

Examples :

- thermic insulating material ;
- thermostatic valve ;
- adaptor with interrupter.

In this case, it is useful to distinguish the grey energy from the saved energy.

From a pedagogical point of view, the use energy must be clearly separated from the energy consumed in order that the product could be available on the market and could be recycled.

Thus the grey energy and the use energy are well separated.

This allows to specify the responsibility of the actors when they choose a product and when they use it.