

What is embodied energy?

Embodied energy is the total hidden energy consumption of a product from production to sale. On average, a household in Europe consumes twice as much embodied energy as direct energy. Only very few people know that the grey energy comes with every purchase of a product and they are also quite uneducated in this area.

For example, most people think that modern cars need less energy to produce, operate and maintain than the old cars. However, this is only true if you take fuel consumption into account and so only partially correct. The new cars are all equipped with GPS systems, electric windows, radios etc. and we need a lot of energy to produce them.

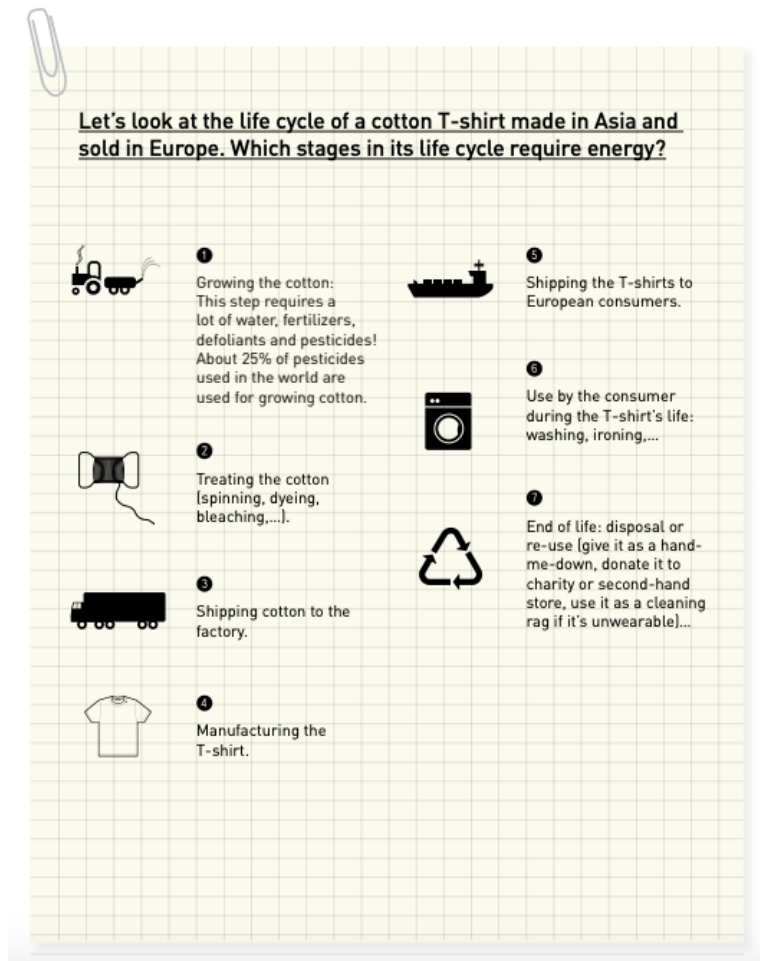
It is very essential to know how products are manufactured, so you can make environmental-friendly choices when you go shopping!

How is Embodied Energy calculated

To calculate the embodied energy of a product, you must take into account the energy associated with:

- extracting and transporting raw materials used to make the product;
- transforming these raw materials and manufacturing the final product;
- packaging the product;
- shipping the product to retailers;
- use of the product;
- collecting and recycling/disposing of the product.

The product therefore needs to be looked at “from cradle to grave”, or better yet, “from cradle to cradle” if it can be recycled.



What can we do to reduce embodied energy

In order to reduce your grey energy consumption, you can:

- print documents only when necessary and reduce the environmental impacts of printing by printing on both sides of paper and by optimizing layout;
- eat less beef (producing it requires energy and polluting fertilizers; cows also emit methane when they digest grass);
- choose products with little or no packaging (buying in bulk whenever possible often helps as you receive more product for less packaging);
- reuse (even if it's for a different use) and recycle products whenever possible;
- buy local and seasonal products (transporting them produces a lot of greenhouse gas emissions).

Question:

How much from the whole energy used is embodied energy?

- 50 %
- 75 %
- 66 %

Vocabulary

- Consumption = Konsum
- Equipped = ausgerüstet
- Manufactured = angefertigt
- Extracting = extrahieren
- Retailers = Händler
- Disposing = anordnen
- from cradle to grave = von der Wiege bis zur Bahre
- fertilizers = Dünger
- emit = ausstossen
- bulk = Masse

Source

http://www.educapoles.org/assets/uploads/teaching_dossiers_files/05_swift_fact_sheet_grey_energy.pdf