Indicator of energy efficiency applied to motorways.

A first step: functional unit’s LCA

The motorway consumes and produces energy...

Describe scenarios...

Split in functional units...

In an existing motorway...

Conclusions...

The objective of the Spanish project called Oasis is to define the main highway of the future, one that in its operation presents higher levels of safety, service, and sustainability. The subproject OASIS is studying a methodology to develop an indicator on energy efficiency, to evaluate the amount of energy linked to a motorway, during its complete life cycle. The methodology will define the system which will study those complications from a general point of view. For example, this methodology will be applied to first an indicator which will measure the embodied energy throughout the life cycle of the motorway. This indicator is to be extended and joint to other indicators, to reach a whole scope of sustainability. The basis to consider the motorway is in its whole dimensions and scope. This means that the aim is to include in one single index, the embodied energy in the cycle of its whole useful life and in the multiple aspects in which this index, including traffic, is appropriate.

1. What is the energy footprint of a motorway?

2. How to calculate the energy footprint?

3. Could you give an example?