General Presentation

With the aim of promoting transport that produces the least amounts of CO$_2$ emissions, the Grenelle Environment requires operators (companies that transport travellers or goods, removal companies, taxis, forwarding companies, travel agents), to inform their customers at each service of the CO$_2$ emissions. This obligation, adopted under the provisions of Law no. 2010-788 of July 12th, 2010 concerning a national commitment to the environment is inserted in the Transport Code (Article L. 1431-3). CO$_2$-information applies to travellers and goods transport.

Decree no. 2011-1336 of October 24th, 2011 determines the principles for calculation that are shared by all modes of transport (rail, road, river, maritime or air transport). It specifies the means by which information is provided to the beneficiary as well as the timetable for implementing these provisions.

Two orders have been taken on April 10th 2012, the first one to give numerical default values to be used in the calculation, and the second one to set October 1st, 2013 as the date when CO$_2$-information will become mandatory.

The methodology used for the calculation is based on the European standard for calculating and declaring energy and greenhouse gas emissions by transport services (EN 16 258 where EN means European Norm), issued in early 2013.

An application handbook was released in October 2012 to help transport professional implement this measure in their companies. It has been released by the French Ministry in charge of Transport and the French Environment and Energy Management Agency (ADEME), with the participation of professional federations and the major companies operating in France. It should be available in English during Spring 2013.

Scope and Target

The CO$_2$ information will be available for every transport service, as soon as it has its beginning or final delivery in France. Only the transport services which only refuel or fix the vehicle in France without loading nor unloading will not have to produce CO$_2$-information.

The unit used to calculate CO$_2$-emissions can be either gram, kilogram, or ton, as soon as it is clearly stated when delivered to the customer. The amounts of carbon dioxide taken into account are those emitted when the means of transport are operational and those originating in the earlier phase of the production of sources of power (refining, transport, distribution, etc.). This approach thus guarantees fair treatment between means of transport using fuel and those running on electrical power.

The information is provided for passenger transport prior to performance of the service and for certain types of transport that may, for example, be used by season-ticket holders, during the journey at the latest. In the case of goods, the date is determined by the service-provider with its customer in order to enable a possibly more
accurate information after the event; otherwise the information is required to be supplied within two months at
the latest after the performance of the service. The CO₂-information must be given within the 2 months
following the transport service occurrence.
The CO₂-information can be provided using several media: it can be included on the quote, on the invoice, on
a specific document, but can also be announced by mail, SMS, or through an internet website. It can also be
shown on the vehicle or in the stations for cabs or public transport. It can also be given at the ticketing
machines.

**Calculation**

Information about the amount of carbon dioxide produced by a transport service is determined on the basis of
each part (leg) of the journey on which a particular means of transport is used.

The Decree describes the general methodology enabling the transport company to calculate the amount of the
energy source consumed for each leg by multiplying the result of the kilometric rate of consumption of the
power source of the means of transport by the distance. The amount of energy is then multiplied by an
emission factor specific to each type of energy. This factor establishes the correspondence between the
amount of power and the amount of CO₂ emitted. A ministerial order from the Minister for Transport determines
the emission factors for the various energy sources that may be used.

The empty trips have to be taken into account in order to provide a complete information about the total CO₂
emissions triggered by the service.

The Decree also determines the level of precision to be used in the calculation:

1. default values fixed by the Ministry in charge of Transport,
2. average values determined by the transport company,
3. values measured specifically by the transport company for each service.

**Solution 1** is allowed for companies with fewer than 50 employees, and for the others until 2016. It will also be
allowed when the company does not have the other levels of data (for example when establishing a new route,
or if a subcontractor does not give the CO₂-information on time). At this level, the empty trips are accounted for
in the average values.

**Solution 2** lets the company make the calculation on its own fleet of vehicles, for the customer to a better
evaluation of his/her emissions. The average values can be calculated using companywide averages. The
averages can also be calculated for each part of any total dividing up of the company operations: per logistic
organisation, type of route, type of means of transport or any other appropriate complete repartition of its
activities.

This solution may be useful for companies using varied means of transport (boats, lorries, trains, cars...). It
requires data collection and statistical treatment about energy consumption, load, or attendance of the
vehicles, for each of the parts above mentioned.

**Solution 3**, which is the most accurate, is not available before the service is provided, and therefore cannot be
provided to customer prior to the contracting.

This solution implies data collection for each transport service (energy consumption, load factor, attendance...) so as to have a precise and specific value for each transport service. This is especially interesting for the
"number of unit" data, in case of a vehicle transporting several lots for several customers.

The levels of data can be combined to the companies convenience. Indeed, it can be interesting to have the
average loading factor of the company, even while using the nationwide-averaged consumption rate.

**More information**

*The application handbook, with plenty of examples and the official nationwide values, is available at:*
http://www.developpement-durable.gouv.fr/Information-CO2-des-prestations-de.html *(soon in English)*

*Carbone Database is available online:*
http://www.basecarbone.fr