CO2 SAVER
CERTIFICATE 2021

VIIA certifies that

ALL OUR CUSTOMERS - TRANSPORT COMPANIES COOPERATING WITH VIIA, LORRY-RAIL & AFA

by using the services of the Rail Motorways, has reduced its carbon footprint by:

- 120 479 000 Kg

FROM **01.01.2021** TO **31.12.2021**

INFORMATION ON THE QUANTITY OF GREENHOUSE GASES EMITTED AND PREVENTED DURING THE TRANSPORT SERVICE

GENERAL METHODOLOGY
To compare CO_2e emissions between a Rail Motorway and an equivalent road service, we used the methodological guide for GHG information for transport services (September 2018 version) prepared by ADEME, pursuant to Article L. 1431-3 of the French Transport Code.

GREENHOUSE GAS EMISSIONS FOR A RAIL SERVICE

For emissions relating to a Rail Motorway journey, the calculation takes into account the following elements:

- The mileage travelled by the train on the rail network
- The average weight of a semi-trailer or ILU
- The rail electricity emission factors* in each country for electricity consumption

CO_2e** emission rates per t.km (Source: Base Carbone, 2021)

Rail Journey in France
0,000107 kg CO_2e/t.km

The CO2 emission factor was calculated based on the electricity mix of each country with the Base Carbone® data from ADEME (French Department of environment and energy).

* The emission factors vary, in particular, according to the energy mix of each country and therefore change annually.
** CO_2e: CO_2 equivalent.

GREENHOUSE GAS EMISSIONS FOR AN EQUIVALENT ROAD SERVICE

For emissions relating to a road journey, the calculation takes into account the following elements:

- The average mileage travelled by road: average between the fastest and the cheapest route (Source: Mappy)
- The fuel consumption rate of a standard diesel fuel goods vehicle (Source: ADEME, 2018)

Consumption rate
Articulated truck 40 tons GCWR – Miscellaneous goods/long distance (Diesel fuel): 0.342 l/km

- Emission factors for diesel fuel (Source: Base Carbone, 2021)

CO_2e emission factor (Upstream phase and operation)
Diesel Fuel B7 : 3,1 kg CO_{2e}/lt

OVERVIEW OF GREENHOUSE GAS EMISSIONS FOR RAIL SERVICES AND ROAD SERVICE

LINE	GHG EMISSIONS RAIL SERVICE PER ILU ($KgCO_2e$)	GHG EMISSIONS EQUIVALENT ROAD SERVICE PER ILU ($KgCO_2e$)	EMISSIONS OF GHG SAVED WITH RAIL SERVICE PER ILU ($KgCO_2e$)
LE BOULOU CALAIS	33,8	1 237,4	1 203,6
LE BOULOU BETTEMBOURG	27,0	1 023,3	996,3
ORBASSANO AITON	17,3	179,6	162,4
CALAIS ORBASSANO	42,4	1 085,8	1 043,4
MACON CALAIS	20,0	782,7	762,7
MACON LE BOULOU	14,5	643,9	629,4
SETE CALAIS	30,5	1 140,4	1 109,9
SETE BETTEMBOURG	22,1	874,9	852,8
LE BOULOU GENNEVILLIERS	26,0	943,3	917,3

GHG: Green house gas. The main greenhouse gases are: CO_2, CH_4, N_2O, HFC, PFC, SF_6, NF_3
ILU = intermodal transport unit

If you would like more information about the methodology used for calculating emitted and saved CO_2, please contact us at zero.emission@viia.com or contact your sales representative.

ViiA ZERO NET EMISION