

ET5 – Realization, simulation and analysis GHG emissions (CO₂e) report and external costs of a freight transport activity.



1. Target

- ▶ Logistics or Supply Chain Managers of private or public companies
- ▶ Logistics Platform Managers (urban logistic platforms, warehouses ...)
- ▶ Local Authority Representatives in charge of urban regulations
- ▶ Transport operators with their own or subcontracted transport fleet

2. Objectives

This study consists in calculating GHG emissions in accordance with the standard European 16-258 CEN requirements for one or more freight transport operation(s), for one or more order(s) and/or carrier(s). The study can be carried out either *ex ante* on the basis of simulated data representing one or more transport service, or *ex post* for services already performed. Allocation of emissions by segment of transport operations is carried out by the weight or another criterion related to the mass (pallet, parcel, TEU ...). External cost (noise, congestion, accident, pollutants, upstream...) are also evaluated according to a methodology developed by TK'Blue and validated by an independent European Scientific Council.

The CO₂e indexes can be calculated on the basis of default or actual values. Calculations are made according to standard EN 16 258 from well to wheel (WTW) or from tank to wheel (TTW).

3. Methodology, Pre-requisite and Organisation

The method for calculating GHG emissions involves, during the first phase of the study, a step of data collection concerning:

- ▶ Transport segments or a simulation hypotheses of an operation including actual loading rates and empty trips.
- ▶ Transport fleet composition of each segment according to the TK'Blue nomenclature (online)
- ▶ The information available to calculate the quantities of energy sources consumed for each segment
- ▶ In some cases, emission factors when the energy source is not mentioned by regulations.

This step is accomplished by exchanging information between the applicant and agency experts who provide the level of technical assistance required.

Once the data is collected, a TK'Blue expert performs GHG emissions calculations according to the standard and calculation of external costs. In case of multiple scenarios, a synthesis is performed.

4. Study steps

Step 1: Identifying the segments constituting the transport operations concerned, collection of the necessary data from the applicant, technical assistance, and evaluation of the contract.

Step 2: Calculating GHG Emissions in Accordance with Regulation / Standard 16 258 / Simulations, and external costs calculation.

Step 3: Producing a study report presenting the kgCO_{2e} emissions of each operation for different scenarios, the external costs and the index per t.km results. In addition, a reminder of the data and assumptions where applicable. A presentation of the study report.

5. Deliverable

The deliverable consists of a detailed study report showing the kgCO_{2e} emissions of different segments for each operation, the resulting index by t.km and the cost of each negative externality (noise, accident, congestion, pollution, upstream...).

6. Resources

The study is conducted by TK Blue experts who participate in International and European working groups (GLEC, ...). The TK'Blue methodology for quantifying externalities is based on internationally recognized methods and the most recent reference data (Ricardo AEA report, CE Delft studies ...). Calculations are carried out in accordance with the applicable standards and regulations: The GHG/CO_{2e} calculator complies with the European standard NF EN 16 258 and is under accreditation of the Smart Freight Center's GLEC framework.

7. References

They trust us :



Projet
Olympic
Energy



NANTES
SAINT-NAZAIRE
PORT



8. For more information :

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