



Position Paper

Brussels, October 2022

Carbon labelling scheme towards sustainable mobility

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Summary

Key messages from the CER Position Paper:

- In the last years the awareness of the transport's impact on the environment (energy consumption, GHG emissions and local pollution) has grown but transport users currently lack a carbon footprint label that is based on a credible methodology.
- The Commission is currently working on this methodology under the CountEmissions EU initiative. Such methodology should be the basis for the development of a carbon labelling scheme that should enable transport users to choose the most sustainable options to achieve shift to clean mobility and at the same time allow service providers to monitor and reduce their emissions and improve the efficiency of their transport services.
- Carbon labelling must indeed be built on a credible CountEmissions EU methodology and use existing knowledge as much as possible. It should nevertheless have a simple design.
- The methodology should be harmonised at the EU level and comply with international standards. The starting point is EN16258 standard, which established a European methodology and currently leading to an international ISO14083 standard.
- The carbon labelling must apply to all transport modes and business segments.

1. Background

As the world strives to keep global warming below 1.5°C all means of transport must decarbonise. In the last years the awareness of the transport's impact on the environment (energy consumption, GHG emissions and local pollution) has grown. The decarbonisation of transport, however, lags behind that of other economic sectors. According to the European Environment Agency (EEA) greenhouse gas (GHG) emissions in the road transport, which is the majority of emissions in transport sector, increased over the last three decades. The emissions from passengers are as a result of increase in passenger volumes and further increasing share of car transport among land-based transport modes. Freight transport growth together with increasing share of road transport have also lead to a similar increase in GHG emissions in freight transport. EEA therefore concluded that improved energy efficiency and the use of biofuels were not enough to reverse the GHG emission gap in transport¹. The greenest mode of land transport, railways are well positioned to support the green transition thanks to lower climate impact².

No doubt that in the near future transport decarbonisation will benefit from electrification and more efficiency. Challenges will remain for the total energy consumption due to increase in transport activity and rebound effects. Other environmental effects and congestion also need to be tackled in the transition to zero-emission private mobility. Changes in transport demand and modal shift will certainly play an important role in reducing GHG emissions from transport. The policy toolkit for transport users and customers currently lack EU carbon labelling, an easy-to-understand tool regarding the carbon footprint of transport services of freight and passenger. The [CountEmissions EU](#) initiative is to set out a common framework to calculate and report transport-related GHG emissions. This is to enable users to choose the most sustainable options to achieve shift to clean mobility and at the same time allow service providers to monitor and reduce their emissions and improve the efficiency of their transport services. CER Position Paper proposes that the EU common GHG emission reporting (CountEmissions EU) should be further developed into a carbon label for shipments of goods and passenger trips. This paper provides examples to highlight the added value of such label in reversing the EU GHG emissions gap in transport and outline a recipe for the policy makers in addressing challenges to tackle before coming up with a legislative proposal.

2. Accounting for carbon footprint in transport

Individual travellers as well as public sector and business corporations directly or indirectly feel responsible for the impact of carbon footprint of their activities. On the other hand, transport is still responsible for about a quarter of the EU's GHG emissions.

The decisions transport users take (driving or cycling, taking the train or the plane, delivery of shipments, etc.) have important consequences for GHG emissions. Carbon labelling systems are best placed to inform individual and organisational choices, which could contribute to a reduction of carbon footprints of goods and services. Reliable data and the right indicators are very much needed to set transport to a sustainable path by supporting the existing policy initiatives such as vehicle standards and carbon taxes.

¹ EEA Report No 02/2022 Decarbonising road transport
<https://www.eea.europa.eu/media/europes-road-transport-needs-to>

² CER Factsheet Railway to a green future
<http://cer.be/publications/latest-publications/railway-green-future>

Added value of carbon labelling in transport

Unlike many other GHG mitigation measures, carbon labelling provides a pragmatic approach to policy makers. Once a methodology on carbon footprint accounting is developed, carbon labelling could be introduced without any complicated regulatory requirements and do not face any political risks such as the ones that come with introducing carbon taxes or bans on GHG emission fleet. In the short term, a carbon label could positively contribute to the GHG budget in transport, while technological innovations are developed for the emission-intensive modes to achieve the EU Green Deal GHG goals.

In addition to influencing a mobility behaviour change, carbon labelling could reduce GHG emissions by inducing efficiency gains in transport operators or triggering changes in supply chains.

Challenges on carbon labelling in transport

Complexity in labelling systems is a major challenge in deploying them in sectors with various actors such as transport. Carbon labelling must be built on a credible methodology using existing knowledge as much as possible and have a simple design. On the other hand, reporting of GHG emissions is strongly determined by the underlying framework conditions and assumptions (e.g. different electricity compositions in the EU Member States), which is somewhat contrary to a simple, practicable, transparent and reliable calculation method.

Therefore, the governance framework of the carbon label is an important issue. According to the literature³ independently sponsored environmental labels have the strongest rules, however, private sector lead better when it concerns standard setting of labels. The label has to be very credible, which could be guaranteed by the authority (EU level with the cooperation of national institutions) implementing it. Sector-specific initiatives would only confuse the potential users and they would risk greenwashing practices.

The impact of climate change concerns on companies' freight transport operations and travel for business and leisure are increasing their importance during the last decade but for behaviour change to happen, clean modes need to be competitive in terms of costs as well. Carbon labelling should, therefore, trigger financial incentives for transport users to achieve modal shift to cleaner mobility.

Methodological aspects of carbon labelling in transport

The methodology should be harmonised at the EU level and comply with international standards. The starting point is EN16258 standard, which established a European methodology and currently leading to an international ISO14083 standard. It should apply to all transport modes and business segments, and therefore be relatively easy to use, not overly specific in focus and not costly to implement. This should be energy-based and built bottom-up. It should consider energy consumption and the type of fuel used. Default values for fleet need to be agreed for the existing technologies but the methodology should also be flexible enough to include new alternative fuels and technologies. Taking loading factors into account and using the well-to-wheel emission factors for type of energy used in transport, GHG emission calculations will be possible. In this exercise it is necessary to factor in the country-specific electricity mix in the upstream (well-to-wheel) process.

³ Taufique, K.M.R., Nielsen, K.S., Dietz, T. et al. Revisiting the promise of carbon labelling. Nat. Clim. Chang. 12, 132–140 (2022). <https://doi.org/10.1038/s41558-021-01271-8>

The aim is to calculate GHG emissions in specific CO₂ equivalent to express the impact of all emissions from GHG. The global warming potential of each GHG should be considered in the calculations.

Load factor is a crucial part of the methodology since it will guide the carbon footprint of operations. The relevant unit should be passenger-km and tonne-km so transporting one passenger/one tonne of freight for one km. This intensity indicator will help to sum up total carbon footprint of journeys.

3. A user perspective of carbon labelling in transport

Carbon accounting and labelling offers significant untapped potential for GHG reductions in transport by complementing other regulatory measures that are proposed by the EU Fit for 55 package. Each user will have different motive in carbon labelling.

- **Shippers**

The carbon labelling for freight transportation aims at establishing a sustainability-driven communication between shippers and transport operators. The methodology is to help a shipper, who looks for environmentally friendly transportation. Ranking of transport offers according to GHG emissions will help shippers to contract a freight operator that matches with shipper's climate ambition. Freight transport is door-to-door therefore intermodality, including transshipments, needs to be accounted for. Incentives in terms of carbon budgets should be offered to shippers to optimise their freight flows.

- **Consumers**

According to a recent survey of Carbon Trust⁴ most consumers support the use of carbon labelling in products and request better information to guide their decisions when making purchases. Carbon labelling is already gaining popularity in the food and cosmetics. Transport is an important part of the production processes across the supply chain and should be addressed using the methodology. The system has to increase carbon transparency across supply chains and be implemented at product level. This is to improve efficiencies in transport and help achieve a more resilient supply chain.

- **Passengers**

Evaluating transport options should be top priority in addressing the transport GHG emissions, whether it is for a daily commute, business travel or a leisure trip. Passenger should be equipped with simple to use calculator to evaluate transport options according to their carbon footprint. Following the pandemic there is a growing interest of climate-conscious leisure travel. Corporate clients, already before the pandemic were more alerted about the climate impact of business travel and wanted sustainable solutions. Carbon labelling in passenger transport therefore could create synergies with the travel industry and consider offering rewarding travellers, who choose the most sustainable options.

- **Transport operators**

Carbon labelling based on the scientific methodology can support individual transport operators with a metric to evaluate their own climate performance. Best practice exchange will be offered to operators to save more energy and GHG emissions. Operators should retain flexibility to communicate their GHG emission performance with the carbon labelling, provided that GHG emissions are accounted using the common methodology.

⁴ Product carbon footprint labelling Consumer research 2020, Carbon Trust, <https://www.carbontrust.com/news-and-events/news/2020-consumer-research-shows-sustained-support-for-carbon-labelling-on>

4. Policy proposals

The Fit for 55 package with the reforms of EU ETS and the Energy Taxation Directives is aiming to set an increased carbon pricing in the transport sector. Carbon pricing coupled with other policy measures on deploying cleaner fuels and updated CO₂ standards for vehicles are all to reduce the transport sector's dependence on fossil fuels and reverse the GHG emission gap. The CountEmissions EU methodology should be an important component of the policy package and complement other Fit for 55 initiatives in developing sustainable mobility.

- All transport modes⁵ have to work together to agree on a harmonised EU framework to calculate GHG emissions from transport operations. The methodology should make comparative analysis possible. Sector-specific initiatives should be discussed under the CountEmissions EU framework.
- GHG emission calculator for transport modes requires reliable emission factors of the energy sources used, utilisation and areas of application of the means of transport. A well-to-wheel approach needs to be implemented and aim in the future also for incorporating emissions from vehicle production and transport infrastructure. The methodology should ideally be built on existing European and international standards, seeking as much international alignment as possible to be credible and avoid redundant costs.
- It will be key to compare transport modes and intermodal journeys. The harmonised methodology should be very credible and easy to use. Verification should be done by independent institutions like the European Environment Agency or Global Reporting Initiative for all transport modes as well as national environmental agencies which have the knowledge on GHG accounting.
- The methodology should lead to GHG accounting at transport service level as minimum and ideally be targeted at shipment level. Vehicle-level assessment or life-cycle emissions will be not helpful and make the system too costly and complicated.
- The carbon footprint reporting and labelling on transport services should be mandatory for all transport service providers. For private motorised transport labelling should be considered in the relevant legislation such as the revision of the CO₂ labelling for cars. It should cover both passenger and freight market. It should be used in various transport services, such as long-haul and urban. It should not preclude transport operators to communicate about their footprint by other means, as long as the data results from calculations using the common methodology.
- The Commission should include a development of a carbon labelling scheme in its legislative proposal on CountEmissions EU. A concrete added value of the methodology, such label is to focus on the uptake of GHG accounting in transport and logistics.

⁵ International Union for Railway (UIC) have the expertise in energy and GHG emission accounting through data collection and reporting. Certified EcoTransIt (trucks, trains, planes, ships and barges) and EcoPassenger (planes, cars and trains) tools offer a good starting point for carbon footprint calculator for freight and passenger services.

About CER

The Community of European Railway and Infrastructure Companies (CER) brings together railway undertakings, their national associations as well as infrastructure managers and vehicle leasing companies. The membership is made up of long-established bodies, new entrants and both private and public enterprises, representing 79% of the rail network length, 77% of the rail freight business and about 90% of rail passenger operations in EU, EFTA and EU accession countries. CER represents the interests of its members towards EU policy makers and transport stakeholders, advocating rail as the backbone of a competitive and sustainable transport system in Europe. For more information, visit www.cer.be or follow us on Twitter [@CER_railways](https://twitter.com/CER_railways) or [LinkedIn](https://www.linkedin.com/company/cer).

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