

From a Flat Rate to a Data-Driven System: What the Toll Reform Demands of Fleets

Anyone who reduces the transformation of the European toll landscape to mere CO₂-based differentiation overlooks just how far-reaching the changes are. The basis for calculation, cost components, documentation requirements, and the legal framework are changing at rapid intervals. Five developments will determine what fleets will pay in the future and what documentation they'll need to provide.

1. The time-based vignette is disappearing

As of July 1, 2026, the Netherlands abolished the Eurovignette and introduced a kilometer-based truck toll (Vrachtwagenheffing). Since then, trucks in classes N2 and N3 with a technically permissible gross vehicle weight of more than 3.5 metric tons have been subject to the toll; the per-kilometer rate is based on the technically permissible gross vehicle weight, the CO₂ emission class, and, in certain cases, the Euro emission class [1]. According to current legislation, Romania is set to follow suit on October 1, 2026, with TollRo, and interoperability with EETS systems is scheduled to take effect on January 15, 2027 [2]. Since then, the Eurovignette area has comprised only Luxembourg and Sweden [1]. The time-based flat rate is thus increasingly giving way to distance-based billing. For fleets, this is more than just a calculation model. A vignette was a fixed cost; a distance-based toll is incurred for every kilometer driven and responds to route selection, vehicle deployment, and utilization. It can be influenced through route planning but can no longer be controlled without reliable data.

2. Multiple Environmental Components Instead of Just One

As of March 25, 2026, an external cost component for traffic-related air pollution must generally be applied to heavy-duty vehicles on road networks subject to an infrastructure charge; the directive allows for certain exceptions [3]. In addition, member states may apply external costs for noise and CO₂-related components. Within this framework, each country decides for itself which components to combine [3]. At the same time, the CO₂ class causes significant variation in the rates. In the Dutch initial tariff for the period from July 1 to August 31, 2026, the range for vehicles over 32 metric tons extends from 0.487 euros per kilometer (CO₂ class 1, Euro 0) to 0.038 euros (CO₂ class 5, zero emissions) [1]. Even the jump from CO₂ Class 2 to 3 amounts to 1.8 cents per kilometer for vehicles over 32 metric tons – roughly 90,000 euros for fifty trucks each traveling 100,000 kilometers annually. In Germany, zero-emission vehicles with a technically permissible gross vehicle weight of up to 4.25 metric tons are exempt from the toll indefinitely; for zero-emission vehicles with a technically permissible gross vehicle weight exceeding 4.25 metric tons, the exemption applies until June 30, 2031, at the latest [4]. The burden of tolls after the exemption expires remains a key consideration for long-term investment calculations.

3. The burden of proof lies with the toll payer

The rules for providing proof are not uniform across Europe. In Germany, vehicles registered with toll service providers are initially assigned to CO₂ emission class 1; suitable documentation is required for a more favorable classification, such as the Registration

Certificate Part I, the Customer Information File, or the EC Certificate of Conformity. Vehicles for which no specific CO₂ emissions are documented – particularly those first registered before July 1, 2019 – are generally assigned CO₂ emission class 1. If the CO₂ emission class is not properly documented, the CO₂ toll rate is calculated based on CO₂ emission class 1 [5]. This is to be distinguished from penalties for violations of the respective operational and payment obligations. In the Netherlands, in particular, the absence of a contract, as well as an on-board unit (OBU) – i.e., the vehicle device for toll collection – that is turned off, not functioning, or assigned to another truck, is subject to fines. If a fine remains unpaid, the vehicle may be taken off the road; the driver may not continue the journey until payment is made [6]. Data maintenance is not a one-time process. It also applies to rental and subcontractor vehicles as well as changing vehicle combinations, whose documentation is often scattered among the manufacturer, the lessor, or in the repair shop's records.

4. Upcoming Deadlines

On June 30, 2026, the Council and the European Parliament reached a provisional agreement on targeted amendments to the Eurovignette Directive. Among other things, it clarifies definitions of zero-emission and low-emission commercial vehicles and is intended to allow Member States to apply reduced user or infrastructure charges for low-emission vehicles under certain conditions. It has not yet been formally confirmed or adopted [7], so additional discounts are not automatically in effect. The rates are also subject to change. In the Netherlands, a 22.3 percent discount applies from September 1 through December 31, 2026. This stems from a concession to the transportation industry, which had to shoulder the new tolls at the same time as rising fuel prices, and is explicitly time-limited. After that, the full rates will apply again [1]. Anyone making calculations beyond the turn of the year must therefore make their assumptions regarding rates and implementation dates transparent.

5. CO₂ Is Priced Separately via Tolls and Fuel

In 2028, the German national emissions trading system will be integrated into the European emissions trading system for buildings, road transport, and additional sectors (EU-ETS 2) [8]. The CO₂ differentiation in the truck toll is based on a separate legal instrument; therefore, both cost mechanisms can, in principle, operate in parallel. However, the Eurovignette Directive provides for a review and, if necessary, adjustment of CO₂-related toll regulations in relation to other CO₂ pricing instruments [3][8]. To determine the actual CO₂-related costs per route, both cost streams must be tracked separately, and their different adjustment cycles must be taken into account.

The Role of EETS: Interoperability as a Lever for Efficiency

The German market illustrates just how significant cross-border traffic is. In 2025, approximately 1.652 million toll-liable vehicles were on federal highways and autobahns; about 794,000 were registered in Germany and about 858,000 abroad. This means that more than half of the vehicles were registered abroad. For vehicles with at least four axles, the share of mileage on highways accounted for by non-resident vehicles exceeded that of resident vehicles [9]. The more criteria, deadlines, and national systems come into play, the more complex self-administration becomes. This is where the European Electronic Toll Service (EETS) comes in. EETS is designed to handle multiple toll zones through a single contract, a single provider, and

an interoperable on-board unit (OBU) [10]. This consolidates contract and device management as well as billing across multiple toll zones. However, this does not standardize national rates, vehicle classifications, or documentation requirements. EETS users must ensure that the transmitted user and vehicle data, as well as the variable parameter data, are correct.

Toll4Europe's sales partners provide support in this regard and actively request any missing documentation; national documentation requirements – such as those regarding CO₂ emission classes – remain unaffected [5][10]. With its EETS service, Toll4Europe covers more than 20 toll services, including those in Germany, the Netherlands, and Poland [11].

Conclusion: Toll Management Is Becoming a Control Task

As long as the toll was a fixed amount, it was a matter for accounting. Now it is a variable that depends on vehicle documentation and varies in each country according to its own system and specific dates. Responsibility is thus shifting from retroactive cost tracking to proactive control. Which vehicle travels which route? Is a zero-emission truck cost-effective there despite varying rates and time limits? And is the documentation proving the claimed CO₂ class available before the first invoice arrives? The decisive factor is therefore no longer just the cost of the toll, but whether a company has the data quality required to obtain the lowest permissible rate in every country and on every reference date. EETS providers can consolidate a large part of this technical and administrative complexity; responsibility for accurate user and vehicle data, as well as national documentation, remains with the fleet [5][10]. The transition is not yet complete; further phases will follow between 2026 and 2028. The question is less whether fleets can keep up, and more how they can organize their work efficiently.

Sources

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About Toll4Europe

Toll4Europe is a German EETS (European Electronic Toll Service) provider that enables transportation companies to handle cross-border toll billing using a single on-board unit (OBU). As a joint venture between T-Systems Road User Services, Daimler Truck, DKV Mobility, and Shell, its goal is to cover all of Europe via a single EETS platform. Toll4Europe's EETS service covers more than 20 toll systems – including those in Germany, Belgium, the Netherlands, and Poland – with more in the works. In addition to toll billing, Toll4Europe offers value-added services, including tracking and tracing, as well as an app for truck drivers featuring a digital parking spot finder.

In addition, the company is actively involved at the European and national levels, including in AETIS (Association of Electronic Toll and Interoperable Services), which is chaired by Toll4Europe CEO Dr. Felix Wex, and as a partner of the BGL (Federal Association of Road Haulage, Logistics, and Waste Management), to help shape the future of European toll systems. More information at: www.toll4europe.eu

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