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Commission Releases First Report on Real-World CO2 Emissions of Cars and Vans

Key policies: *CO2 Emission Standards for Cars and Vans, On-Board Fuel Consumption Monitoring (OBFCM) Regulation, Worldwide Harmonised Light Vehicles Test Procedure (WLTP), European Green Deal, Fit for 55 Package, Utility Factor Regulation*

The European Commission has published its first comprehensive report on the real-world CO2 emissions and fuel consumption of new passenger cars and vans. This groundbreaking report is based on data collected in 2021 from on-board fuel consumption monitoring (OBFCM) devices installed in vehicles across the EU.

Key Findings

The analysis of a sample of **600,000 cars** reveals a consistent gap between real-world and laboratory-tested emissions:

- **Diesel and Petrol Vehicles**: Real-world CO2 emissions and fuel consumption are approximately **20% higher** than the official values derived from the WLTP (Worldwide Harmonised Light Vehicles Test Procedure) type-approval test.
- **Plug-In Hybrid Electric Vehicles (PHEVs)**: Real-world CO2 emissions are **3.5 times higher** than laboratory values, largely due to infrequent charging and less-than-expected use of the electric driving mode.

The report confirms that these discrepancies align with the Commission's earlier assumptions, which accounted for real-world variables like traffic conditions, ambient temperature, road conditions, and driver behavior that are difficult to replicate in laboratory settings.

The Role of OBFCM Devices

Since January 2021, all new cars and small vans that run on liquid fuels must be equipped with OBFCM devices before being sold in the EU. These devices record data on fuel or energy consumption and distance traveled, providing critical insights into real-world vehicle performance.

Vehicle manufacturers are required to collect this data and report it annually to the Commission. For the first year, the dataset included **10.6% of cars** and **1.0% of vans** registered in 2021. While this initial coverage was lower than expected, it marked an important step in improving transparency and accountability in emissions reporting.

Gaps in Monitoring and Future Steps

- **Cars**: The data for petrol cars shows an average real-world emissions gap of **23.7%**, while diesel cars show an **18.1% gap**. These findings are consistent with assumptions made in the Commission's Impact Assessments for revising vehicle CO2 standards.
- **Vans**: Data availability for vans was limited due to the later implementation of OBFCM requirements. A more comprehensive dataset is expected for vehicles registered in 2022.

This project is supported by the Interreg Danube Region Programme co-funded by the European Union.

The Commission has already taken steps to address discrepancies, particularly for PHEVs. Adjustments to the **utility factor**—the assumed share of distance driven electrically—will take effect in 2025. Future adjustments may follow based on ongoing real-world data collection.

Implications for Climate Goals

This real-world data provides valuable insights for shaping EU policies and ensuring the effectiveness of existing vehicle emissions regulations. It also underlines the need for continued innovation and enforcement to bridge the gap between real-world and laboratory emissions, helping the EU achieve its ambitious climate targets under the **European Green Deal**.

Next Steps

As the dataset expands and becomes more representative of the evolving fleet, the Commission will be better equipped to assess trends and identify necessary regulatory changes. In the meantime, the findings will inform ongoing policy discussions, including the review of the vehicle CO2 standards.

For more information, access the full report and data on the European Environment Agency website.

Source:

- *https://climate.ec.europa.eu/news-your-voice/news/first-commission-report-real-world-co2-emissions-cars-and-vans-using-data-board-fuel-consumption-2024-03-18_en*
- *https://climate.ec.europa.eu/news-your-voice/news/first-commission-report-real-world-co2-emissions-cars-and-vans-using-data-board-fuel-consumption-2024-03-18_en*