

March 2023

Regulatory Environment

CO₂ Emissions under legal observations

EU Climate Targets

European Green Deal - From the past into the future



Dec 2019

"... will reduce net greenhouse gas emissions **to zero in the European Union by 2050** ..."

(binding annual greenhouse gas emission reductions by Member States)

Sept 2020

Tightening of the **CO₂ reduction target 2030 to 55%** with reference to 1990 by the EU Commission

July 2021

Presentation of the "**Fit for 55**" package for the implementation of climate protection goals

May 2022

REPowerEU – Raising energy efficiency targets and **accelerating the expansion of renewable energies**

EU Climate Targets

Relevant existing regulations to be considered



Regulation **(EU) 2019/631** Setting CO₂ emission performance standards for passenger cars & for light commercial vehicles

↳ amended by Regulation (EU) 2020/22
amended by Regulation (EU) 2020/1590
amended by Regulation (EU) 2020/2173
amended by Regulation (EU) 2021/1961

Regulation **(EU) 2021/392** Monitoring and reporting of data relating to CO₂ emissions from passenger cars and light commercial vehicle

Regulation **(EU) 715/2007** Type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6)

↳ amended by Regulation (EU) 2017/1151

EU Climate Targets

Relevant existing regulations to be considered



Regulation **(EU) 2017/2400** Determination of CO₂ emissions and fuel consumption of heavy-duty vehicles

↳ amended by Regulation (EU) 2019/318
amended by Regulation **(EU) 2020/1181**
amended by Regulation **(EU) 2022/1379**



1. Implementing Regulation in accordance with the requirements of (EC) 595/2009
2. Scope for vehicles of category N2 >7.4t and N3 and M3>7.5 t
3. Definition of vehicle groups for the VECTO calculation and assignment to the "driving cycles" (long-haul, regional delivery traffic, urban delivery traffic ...)
4. Description of the input parameters and the procedure for determining these parameters for the simulation tool VECTO for the determination of CO₂ emissions and fuel consumption of new vehicles

EU Climate Targets

Relevant existing regulations to be considered



Regulation **(EC) 595/2009** Type-approval of heavy-duty vehicles with regard to emissions and

Regulation **(EU) 2019/1242** Setting CO₂ emission standards for heavy-duty vehicles

1. Applies initially to vehicles of groups 4, 5, and 6 (trucks and semi-trailer tractors with a wheel configuration 4x2 and more than 16 t as well as trucks and semi-trailer tractors with a wheel configuration 6x2) later also groups 1, 2, and 3 (medium-duty commercial vehicles 2-16t) and finally groups 11, 12 and 13 (trucks with more than one driven axle)
2. Reduction targets for CO₂ emissions of 15 percent (2025) and 30 percent (2030) – compared to the reference period (1 July 2019 to 30 June 2021)
3. Penalties for non-compliance of 4750 EUR/g CO₂/tkm (until 2029) and 6800 EUR/g CO₂/tkm (from 2030)
4. Review 2022
5. By 31 December 2024, the Commission shall adopt, by means of implementing acts, the following measures:
 - ...Method for assessing the performance of vehicles of categories O3 and O4 with regard to their impact on CO₂ emissions, fuel consumption of motor vehicles...

EU Climate Targets

Proposal for an amendment of (EU) 2019/1242

Today



LDV (N1 up to 2.61 t / 2.84 t ref. mass)

2025-2029	CO ₂ -Reduction 15%
from 2030	CO ₂ -Reduction 31%



HDV (N2/N3 ≥ 7.5 t
as tractor or lorry with 4x2, 6x2)

2025-2029	CO ₂ -Reduction 15%
from 2030	CO ₂ -Reduction 30%

Remark:

Cars/LDV: Reduction compared to 2021
Regulated HDV: Reduction compared to 2019/2020
New included HDV compared to 2025**

* Already included subgroups, new subgroups 0%

** assumed that 50 vehicles are registered in this subgroup in Europe in this year

Proposed by European Commission (February 2023)



LDV (N1 up to 2.61 t / 2.84 t ref. mass)

2025-2029	CO ₂ -Reduction 15%
2030-2035	CO ₂ -Reduction 50%
from 2035	CO ₂ -Reduction 100%



Medium and HDV (N2/N3 ≥ 5,0 t
as tractor or lorry with 4x2, 6x2, 6x4, 8x4)

2025-2029	CO ₂ -Reduction 15%*
2030-2035	CO ₂ -Reduction 43%
2035-2040	CO ₂ -Reduction 64%
From 2040	CO ₂ -Reduction 90%



Centre-Axle/Drawbar-Trailer (O3/O4 from
8 tonnes with box body and max. 3 axles)

from 2030	CO ₂ -Reduction 7.5%
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Semi-Trailer (O3/O4 from 8 tonnes with
box body and max. 3 axles)

from 2030	CO ₂ -Reduction 15%
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Coaches (incl. primary veh.) (M3 >7.5 t max.
perm. mass)

2030-2035	CO ₂ -Reduction 43%
2035-2040	CO ₂ -Reduction 64%
from 2040	CO ₂ -Reduction 90%



City buses (M3 >7.5 t max. perm. mass)

from 2030	CO ₂ -Reduction 100%
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EU Climate Targets

Relevant existing regulations to be considered



Regulation **(EU) 2018/956** Monitoring and reporting of CO₂ emissions from and fuel consumption of new heavy-duty vehicle

1. It applies with regard to the following vehicle categories:
 - (a) vehicles of categories M₁, M₂, N₁ and N₂ with a reference mass that exceeds 2610 kg and which do not fall within the scope of Regulation (EC) No 715/2007 of the European Parliament and of the Council, and all vehicles of categories M₃ and N₃;
 - (b) vehicles of categories O₃ and O₄
2. Starting from 1 January 2019
3. By 30 September each year, starting in 2020, the competent authorities of the Member States shall report those data of the previous reporting period of 1 July to 30 June

EU Climate Targets

Relevant existing regulations to be considered



Commission Implementing Decision **(EU) 2021/781** Publication of a list indicating certain CO₂ emissions values per manufacturer as well as average specific CO₂ emissions of all new heavy-duty vehicles registered in the Union and reference CO₂ emissions for the reporting period of the **year 2019**

Commission Implementing Decision **(EU) 2022/2336** Publication of a list indicating certain CO₂ emissions values per manufacturer as well as average specific CO₂ emissions of all new heavy-duty vehicles registered in the Union pursuant to Regulation (EU) 2019/1242 of the European Parliament and of the Council for the reporting period of the **year 2020**

EU Climate Targets

Relevant existing regulations to be considered



Regulation [\(EU\) 2022/1362](#) Performance of heavy-duty trailers with regard to their influence on the CO₂ emissions, fuel consumption

1. Implementing Regulation in accordance with the requirements of (EC) 595/2009
2. Scope for vehicles of category O3>8t and O4
3. Definition of vehicle groups for the VECTO calculation and assignment to the "driving cycles" (long-haul, regional delivery traffic, urban delivery traffic ...)
4. Description of the input parameters and the procedure for determining these parameters for the simulation tool VECTO for the determination of CO₂ emissions and fuel consumption of new vehicles

EU Climate Targets

Missing vehicle classes in the CO₂ certification



Still open

Medium duty vehicles (> 2.61 t / 2.84 t to ≤ 5.0 t)

Smaller buses M2

Real "Box body" superstructures on motor vehicle chassis for N2, N3

European Modular System (EMS) and trailers which are out of scope from 2024