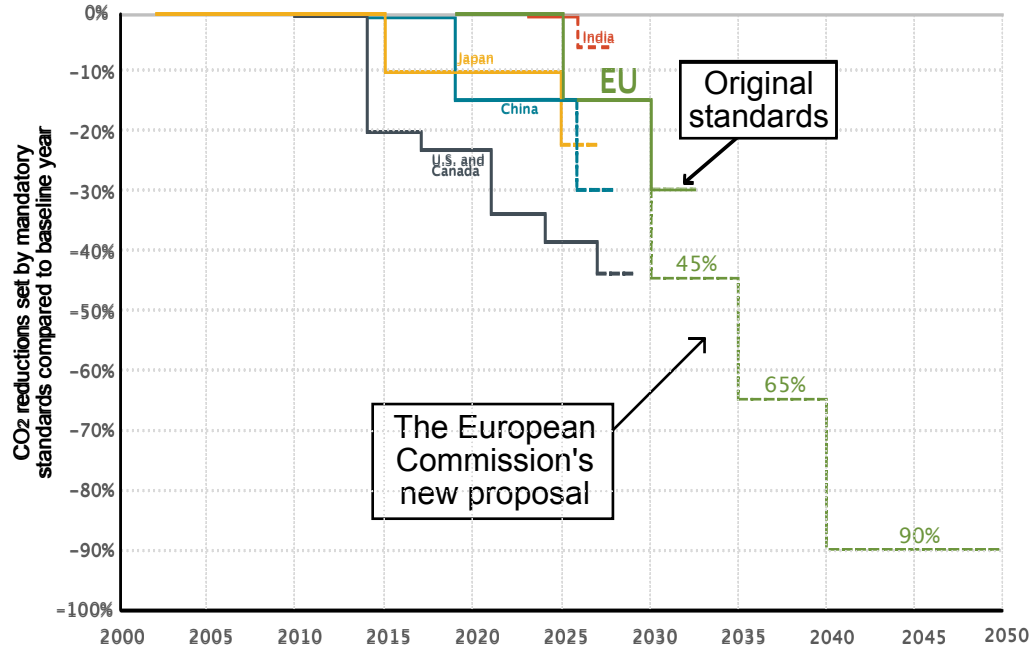


# Analyzing Europe's CO<sub>2</sub> standards proposal for trucks and buses

Eamonn Mulholland

Feb 21st 2023

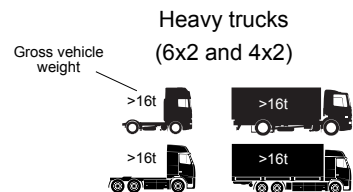
# Europe's new heavy-duty CO<sub>2</sub> standards



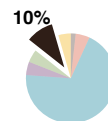
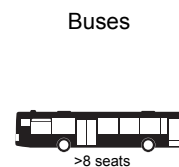
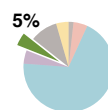
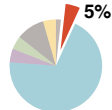
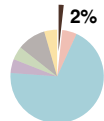
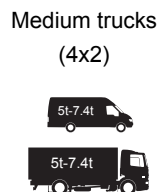
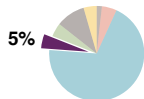
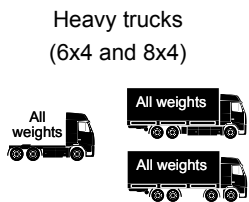
# What's covered

## Newly added vehicles

### Covered under the original standards



Annual emissions  
(2020)



n.a.

# What's not covered

Light trucks  
(4x2)



Heavy trucks  
(4x4)



Vocational  
vehicles



Heavy trucks  
(6x6)

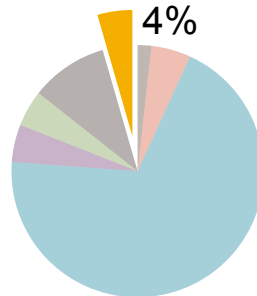


Heavy trucks  
(4\* and 5 axles)



\*excluding 8x4

Annual  
emissions  
(2020)



# The new targets

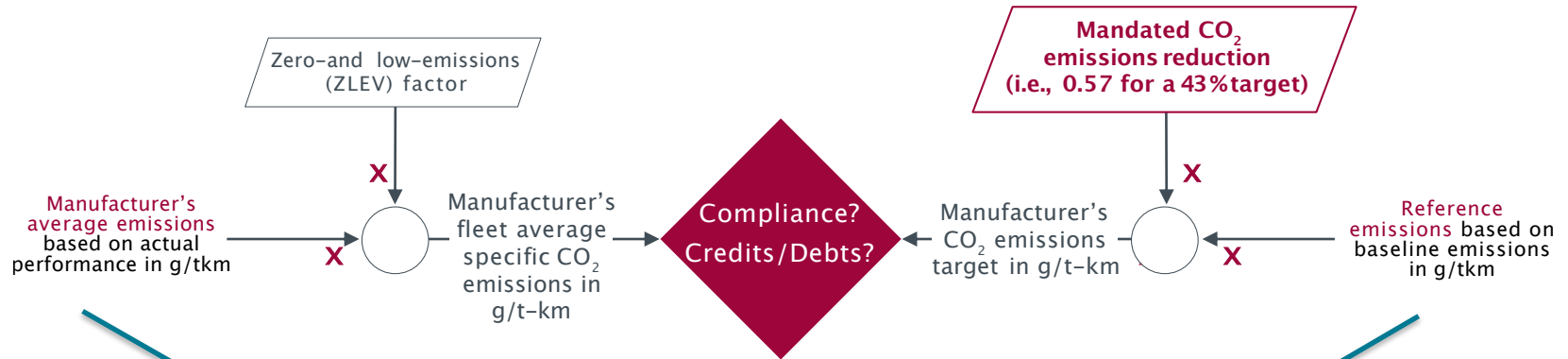
	2030	2035	2040
Trucks	43%	64%	90%
Coaches	43%	64%	90%
Buses	100%	100%	100%
Semi-trailers	15%	15%	15%
Drawbar trailers	7.5%	7.5%	7.5%

Reference periods:

Previously regulated trucks – 2019/2020

All newly added vehicles – 2024/2025

# Compliance



Weighted by MPW

Weighted by MPW

Compliance is measured separately for:

- (i) Freight vehicles (trucks and trailers)
- (ii) Passenger vehicles (buses and coaches)

Subgroup	Annual mileage (km)	Payload (t)	MPW
>16t	16,000	13.84	1
4-LH	98,000	7.42	0.45
5t-7.4t	58,000	1.15	0.04

# Flexibilities – the ZLEV incentive

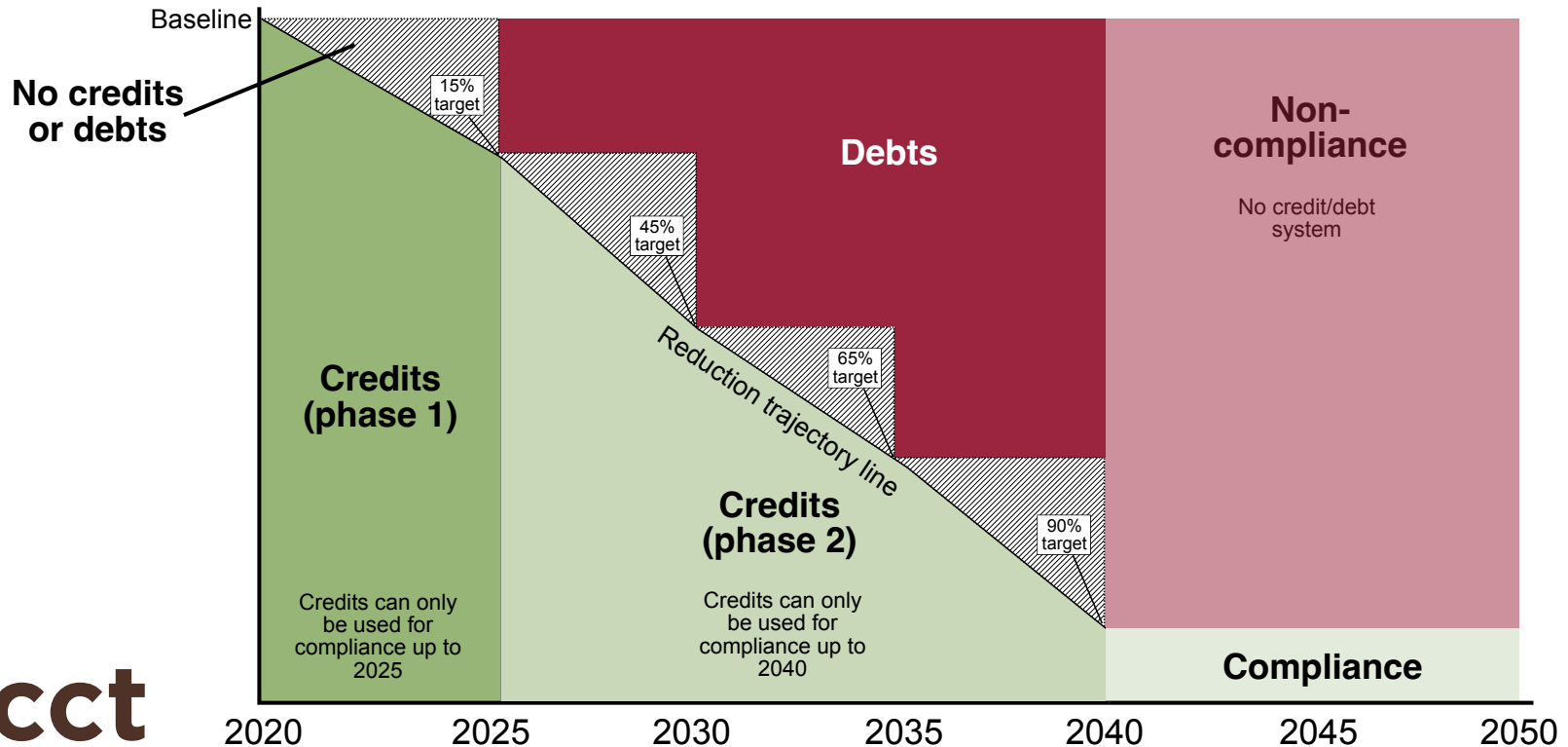
## From 2019 – 2024 Super-credits phase:

- No minimum sales requirement
- Zero emission vehicles are **double** counted
- ZLEV factor reduces fleet emissions by up to 3%

## From 2025 – 2029 Benchmark phase:

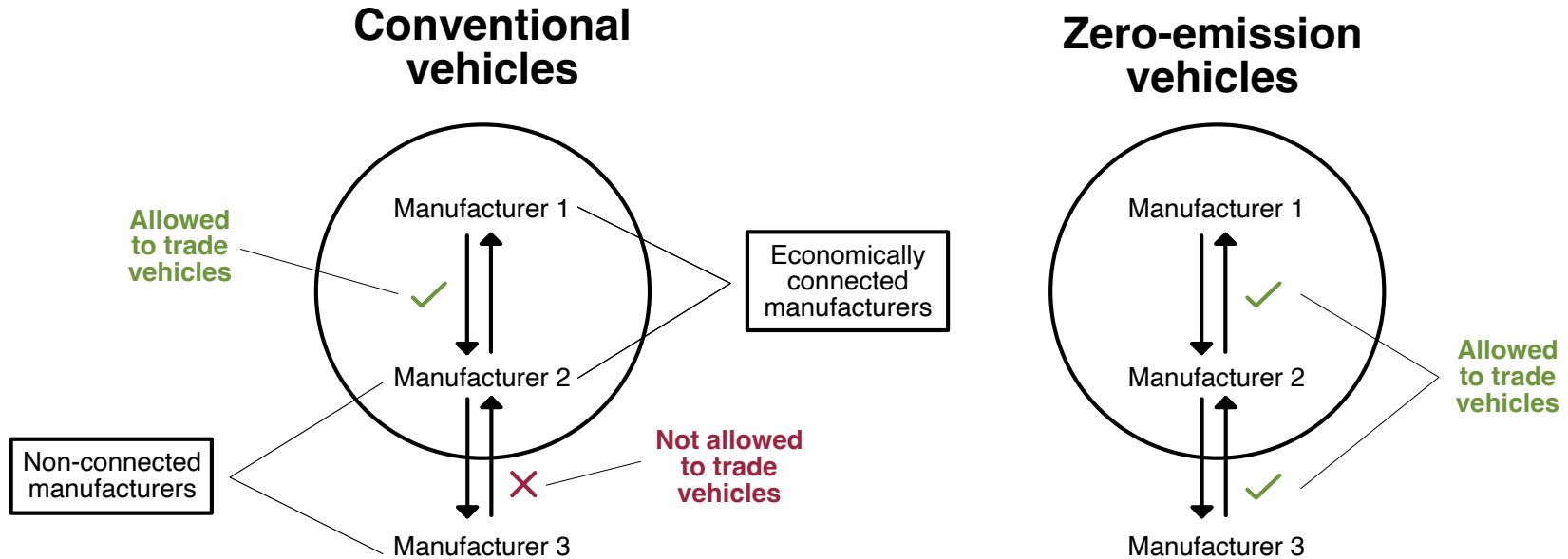
- Minimum ZLEV share of 2%
- Zero emission vehicles are **single** counted
- ZLEV factor reduces fleet emissions by up to 3% (with a share of up to 5%)

# Flexibilities – The credit and debt system





# Flexibilities – vehicle trading



# Changes in definition: Zero-emission vehicles

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Currently:

**$\leq 1\text{gCO}_2/\text{vkm}$**

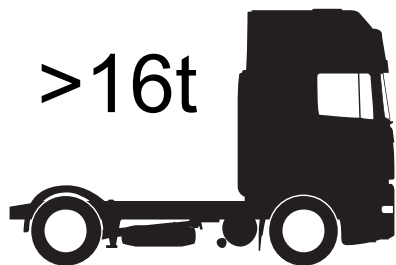
(0.1% of the emissions of a standard tractor-trailer)

Proposal:

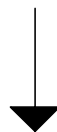
**$\leq 5\text{gCO}_2/\text{tkm}$**

(10% of the emissions of a standard tractor-trailer)

# Changes in definitions: Long-haul vehicles



New



Cab type	Engine power	Operational range	Sub-group	MPW
Day cab	All	All	Regional delivery	0.45
Sleeper cab	<265kW			
	≥265kW	<350km	Long-haul	1
		≥350km		

# Change in penalties

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**From 2025-2030:**

Vehicles sold x  
€4,250 per gCO<sub>2</sub>/tkm over

**After 2030:**

Vehicles sold x  
€6,800 per gCO<sub>2</sub>/tkm

**Missing target by 1%**

(for a manufacturer that sells 25,000 vehicles)

**2025: €57 million**

**2030: €92 million**

# Change in penalties

**From 2025:**

Vehicles sold x  
€4,250 per gCO<sub>2</sub>/tkm over

~~**After 2030:**~~

~~Vehicles sold x  
€6,800 per gCO<sub>2</sub>/tkm~~

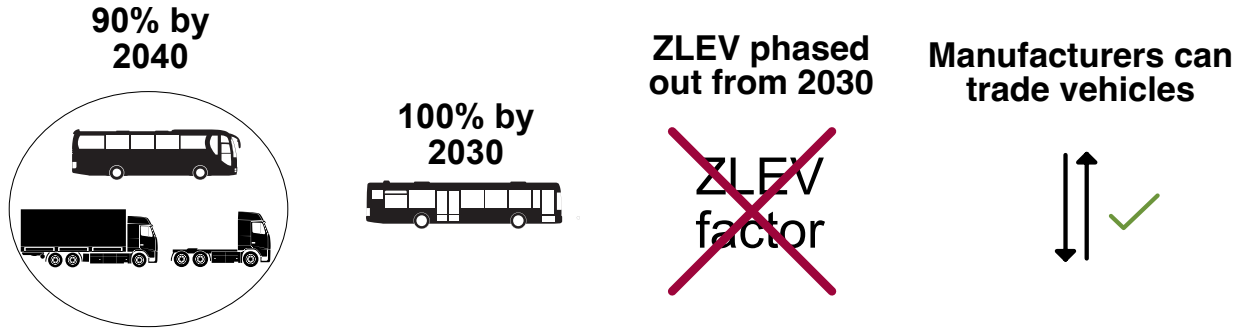
**Missing target by 1%**

(for a manufacturer that sells 25,000 vehicles)

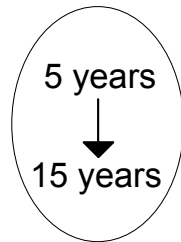
**2025: €57 million**

**2030: €57 million**

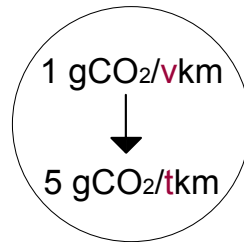
# Summary



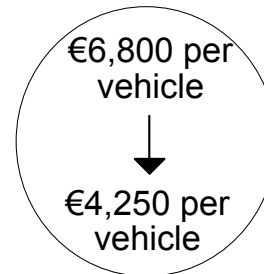
**Max credit life has increased**



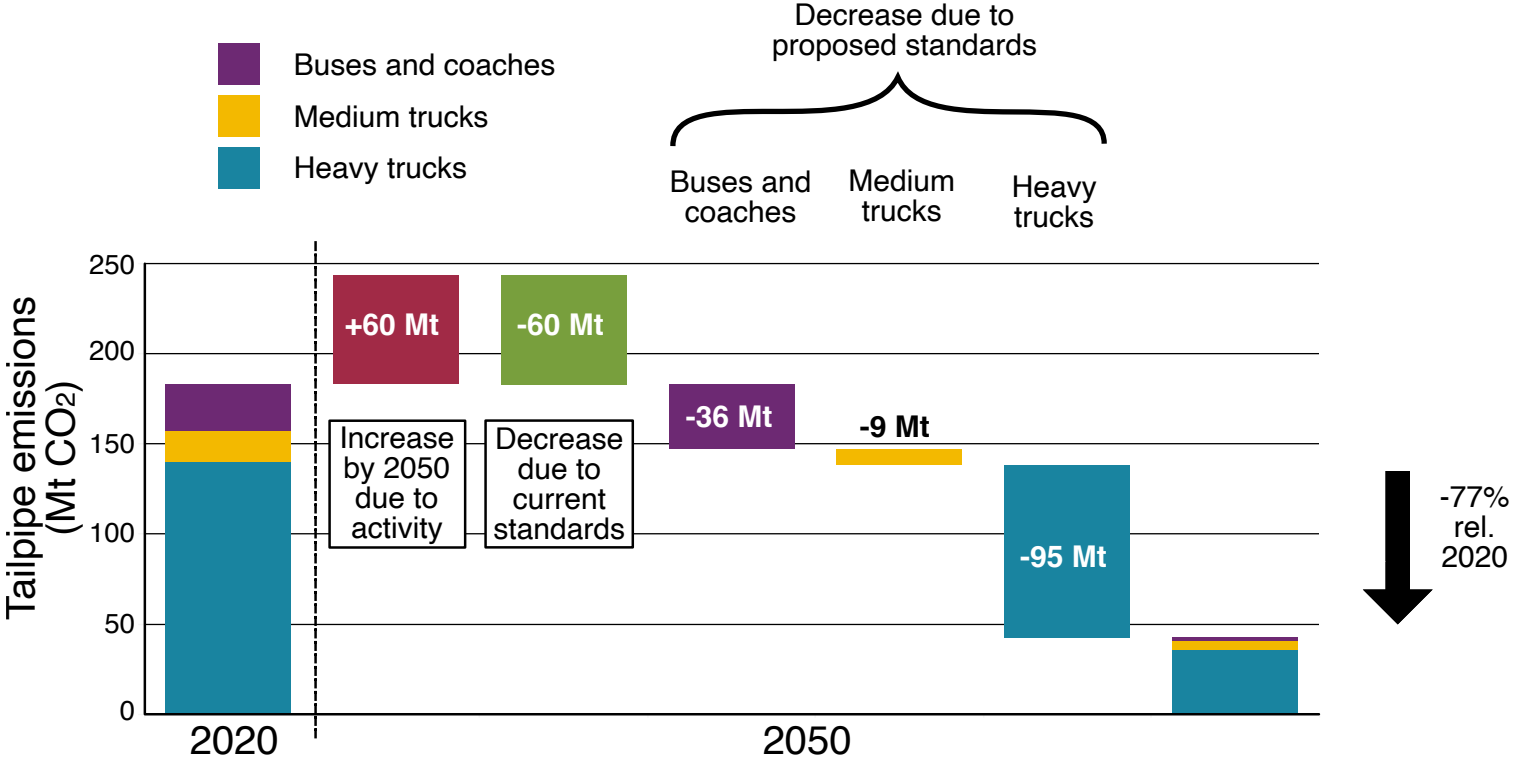
**Higher emission threshold for ZEVs**



**Lower penalties**



# Projected emission reductions



Questions?  
Contact [e.mulholland@theicct.org](mailto:e.mulholland@theicct.org)

**icct**

THE INTERNATIONAL COUNCIL  
ON CLEAN TRANSPORTATION