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ANNEX 1

ANNEX

to the

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures
(Text with EEA relevance)

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ANNEX

to the

DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

amending Directive 1999/62/EC on the charging of heavy goods vehicles for the use of certain infrastructures
(Text with EEA relevance)

(1) Annexes 0, III, IIIa, IIIb and IV are amended as follows:

(a) in Annex 0, Section 3 is amended as follows:

(i) the heading is replaced by the following:

'3. ‘EURO III’/‘EURO IV’/‘EURO V’ vehicles';

(ii) in the table, the line concerning "EEV' vehicle' is deleted;

(iii) the following is added:

'Euro VI Emission Limits

	Limit values							
	CO (mg/kWh)	THC (mg/kWh)	NMHC (mg/kWh)	CH_4 (mg/kWh)	NO_X (1) (mg/kWh)	NH_3 (ppm)	PM mass (mg/kWh)	PM number (#/kWh)
WHSC (CI)	1500	130			400	10	10	$8,0 \times 10^{11}$
WHTC (CI)	4000	160			460	10	10	$6,0 \times 10^{11}$
WHTC (PI)	4000		160	500	460	10	10	$6,0 \times 10^{11}$

Note:

PI = Positive Ignition.
CI = Compression Ignition.

(1) The admissible level of NO_2 component in the NO_x limit value may be defined at a later stage.';

(b) Annex III is amended as follows:

(i) Section 2 is amended as follows:

— in point 2.1., the sixth indent is replaced by the following:

'— Costs shall be apportioned to heavy duty vehicles on an objective and transparent basis taking account of the proportion of heavy duty vehicle traffic to be carried on the network and the associated costs. The vehicle kilometres travelled by heavy duty vehicles may for this purpose be adjusted by objectively justified 'equivalence factors' such as those set out in point 4 (*).

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* The application of equivalence factors by Member States may take account of road construction developed on a phased basis or using a long life cycle approach.';

— in point 2.2., the second indent is replaced by the following:

'— Such costs shall be apportioned between heavy duty vehicles and other traffic on the basis of actual and forecast shares of vehicle kilometres and may be adjusted by objectively justified equivalence factors such as those set out in point 4.';

(ii) in Section 4, the heading and the first indent are replaced by the following:

'4. SHARE OF HEAVY DUTY VEHICLE TRAFFIC, EQUIVALENCE FACTORS AND CORRECTION MECHANISM

– The calculation of tolls shall be based on actual or forecast shares of heavy duty vehicle kilometres adjusted, if desired, by equivalence factors, to make due allowance for the increased costs of constructing and repairing infrastructure for use by heavy duty vehicles.';

(c) Annex IIIa is replaced by the following:

'**ANNEX IIIa**

MINIMUM REQUIREMENTS FOR LEVYING AN EXTERNAL-COST CHARGE

This Annex sets out the minimum requirements for levying an external-cost charge and, where applicable, for calculating the maximum external-cost charge.

1. *The parts of the road network concerned*

The Member State shall specify precisely the part or parts of their road network which are to be subject to an external-cost charge.

Where a Member State intends to levy an external-cost charge on only a part or parts of the road network composed of its share in the trans-European network and of its motorways, the part or parts shall be chosen after an assessment establishing that:

– vehicles' use of the roads where the external-cost charge is applied generates environmental damage higher than that generated on average assessed in accordance with air quality reporting, national emissions inventories, traffic volumes and, for noise, in accordance with Directive 2002/49/EC, or

– the imposition of an external-cost charge on other parts of the road network thus composed might have adverse effects on the environment or road safety, or levying and collecting an external-cost charge on them would entail disproportionate cost.

2. *The vehicles, roads and time period covered*

Where a Member State intends to apply higher external-cost charges than the reference values specified in Annex IIIb, it shall notify the Commission of the classification of vehicles according to which the external-cost charge shall vary. It shall also notify the Commission of the location of roads subject to higher external-cost charges (called hereafter 'suburban roads

(including motorways)'), and of roads subject to lower external-cost charges (called hereafter 'interurban roads (including motorways)').

Where applicable, it shall also notify the Commission of the exact time periods corresponding to the night period during which a higher external noise-cost charge may be imposed to reflect greater noise nuisances.

The classification of roads as suburban roads (including motorways) and interurban roads (including motorways), and the definition of time periods shall be based on objective criteria related to the level of exposure of the roads and their vicinities to pollution such as population density, the annual mean air pollution (in particular for PM_{10} and NO_2) and the number of days (for PM_{10}) and hours (NO_2) on which limit values established under Directive 2008/50/EC are exceeded. The criteria used shall be included in the notification.

3. ***Amount of the charge***

This section shall apply where a Member State intends to apply higher external cost charges than the reference values specified in Annex IIIb.

For each vehicle class, type of road and time period, the Member State or, where appropriate, an independent authority shall determine a single specific amount. The resulting charging structure shall be transparent, made public and available to all users on equal terms. The publication should occur in a timely manner before implementation. All parameters, data and other information necessary to understand how the various external-cost elements are calculated shall be made public.

When setting the charges, the Member State or, where appropriate, an independent authority shall be guided by the principle of efficient pricing that is a price close to the social marginal cost of the usage of the vehicle charged.

The charge shall be set after having considered the risk of traffic diversion together with any adverse effects on road safety, the environment and congestion, and any solutions to mitigate these risks.

The Member State or, where appropriate, an independent authority, shall monitor the effectiveness of the charging scheme in reducing environmental damage arising from road transport. It shall every two years adjust, where appropriate, the charging structure and the specific amount of the charge set for a given class of vehicle, type of road and period of time to the changes in transport supply and demand.

4. **External-cost elements**

4.1. Cost of traffic-based air pollution

Where a Member State intends to apply higher external-cost charges than the reference values specified in Annex IIIb, that Member State or, where appropriate, an independent authority shall calculate the chargeable cost of traffic–based air pollution by applying the following formula:

$$PCV_{ij} = \sum_k EF_{ik} \times PC_{jk}$$

where:

— PCV_{ij} = air pollution cost of vehicle class i on road type j (euro/vehicle.kilometre)

— EF_{ik} = emission factor of pollutant k and vehicle class i

(gram/vehicle.kilometre)

— PC_{jk} = monetary cost of pollutant k for type of road j (euro/gram)

The emission factors shall be the same as those used by the Member State to establish the national emissions inventories provided for in Directive (EU) 2016/2284 of the European Parliament and of the Council of on the reduction of national emissions of certain atmospheric pollutants * (which requires use of the EMEP/EEA air pollutant Emission Inventory Guidebook**). The monetary cost of pollutants shall be estimated by the Member State or, where appropriate, the independent authority referrred to in Article 7c(4), using scientifically proven methods.

The Member State or, where appropriate, an independent authority may apply scientifically proven alternative methods to calculate the value of air pollution costs using data from air pollutant measurement and the local value of the monetary cost of air pollutants.

4.2. Cost of traffic-based noise pollution

Where a Member State intends to apply higher external-cost charges than the reference values specified in Annex IIIb, the Member State or, where appropriate, an independent authority shall calculate the chargeable cost of traffic–based noise pollution by applying the following formulae:

$$NCV_j\ (\text{daily}) = e \times \Sigma_k\ NC_{jk} \times POP_k / WADT$$

$$NCV_j\ (\text{day}) = a \times NCV_j$$

$$NCV_j\ (\text{night}) = b \times NCV_j$$

where:

—	NCV_j =		noise cost of one heavy goods vehicle on road type j (euro/vehicle.kilometre)
—	NC_{jk} =		noise cost per person exposed on road type j to noise level k (euro/person)
—	POP_k =		population exposed to daily noise level k per kilometre (person/kilometre)
—	WADT =		weighted average daily traffic (passenger car equivalent)
—	a and b		are weighting factors determined by the Member State in such a way that the resulting weighted average noise charge per vehicle kilometre corresponds to NCV_j (daily).

The traffic-based noise pollution relates to the impact of noise on health of citizens around the road.

The population exposed to noise level k shall be taken from the strategic noise maps drafted under Article 7 of Directive 2002/49/EC of the European Parliament and the Council ***.

The cost per person exposed to noise level k shall be estimated by the Member State or, where appropriate, an independent authority, using scientifically proven methods.

The weighted average daily traffic shall assume an equivalence factor 'e' between heavy goods vehicles and passenger cars derived on the basis of the noise emission levels of the average car and of the average heavy goods vehicle and considering the Regulation (EU) No 540/2014 of the European Parliament and of the Council of 16 April 2014 on the sound level of motor vehicles and of replacement silencing systems, and amending Directive 2007/46/EC and repealing Directive 70/157/EEC.

The Member State or, where appropriate, an independent authority, may establish differentiated noise charges to reward the use of quieter vehicles provided it does not result in discrimination against foreign vehicles.

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* Directive (EU) 2016/2284 of the European Parliament and of the Council of 14 December 2016 the reduction of national emissions of certain atmospheric pollutants, amending Directive 2003/35/EC and repealing Directive 2001/81/EC (OJ L 344, 17.12.2016, p. 1).

** Methodology of the European Environmental Agency: http://www.eea.europa.eu//publications/emep-eea-guidebook-2016

*** Directive 2002/49/EC of the European Parliament and the Council of 25 June 2002 relating to the assessment and management of environmental noise (OJ L 189, 18.7.2002, p. 12).";

(d) Annex IIIb is replaced by the following:

'**ANNEX IIIb**

REFERENCE VALUES OF THE EXTERNAL-COST CHARGE

This Annex sets out reference values of the external-cost charge, including the cost of air pollution and noise.

Table 1: reference values of the external-cost charge for heavy goods vehicles

Vehicle class	**cent/vehicle-kilometre**	**Suburban(1)**	**Interurban(2)**
Heavy goods vehicle having a maximum permissible gross laden weight of less than 14 tonnes or having two axles	EURO 0	13,3	8,3
	EURO I	9,1	5,4
	EURO II	8,8	5,4
	EURO III	7,7	4,3
	EURO IV	5,9	3,1
	EURO V	5,7	1,9
	EURO VI	3,2	0,6
	Less polluting than EURO VI	2,5	0,3
Heavy goods vehicle having a maximum permissible gross laden	EURO 0	23,3	15,1
	EURO I	16,4	10,1
	EURO II	15,7	10,0

weight between 14 and 28 tonnes or having three axles	EURO III	13,5	8,2
	EURO IV	9,5	5,7
	EURO V	8,9	3,7
	EURO VI	3,6	0,8
	Less polluting than EURO VI	2,5	0,3
Heavy goods vehicle having a maximum permissible gross laden weight between 28 and 40 tonnes or having four axles	EURO 0	30,4	19,7
	EURO I	22,6	13,9
	EURO II	21,3	13,9
	EURO III	17,8	11,2
	EURO IV	12,2	7,7
	EURO V	9,2	4,0
	EURO VI	3,5	0,8
	Less polluting than EURO VI	2,5	0,3
Heavy goods vehicle having a maximum permissible gross laden weight above 40 tonnes or having 5 or more axles	EURO 0	43,0	28,6
	EURO I	31,5	19,8
	EURO II	29,2	19,4
	EURO III	24,0	15,6
	EURO IV	16,2	10,6
	EURO V	9,8	4,7
	EURO VI	3,6	1,0
	Less polluting than EURO VI	2,5	0,3

(1) 'Suburban' means areas with a population density between 150 and 900 inhabitants/km^2 (median population density of 300 inhabitants/km^2).

(2) 'Interurban' means areas with a population density below150 inhabitants/km^2.

Table 2: reference values of the external-cost charge for coaches

Vehicle class	**cent/vehicle-kilometre**	**Suburban(1)**	**Interurban(2)**
Coach having maximum permissible gross laden weight of 18 tonnes or having two axles	EURO 0	20,3	13,1
	EURO I	16,0	10,4
	EURO II	15,6	9,9
	EURO III	13,9	8,5
	EURO IV	10,0	5,7
	EURO V	9,0	5,0
	EURO VI	2,8	0,8
	Less polluting than EURO VI	1,4	0,2
Coach having maximum permissible gross laden weight	EURO 0	24,9	16,2
	EURO I	19,2	12,3
	EURO II	18,5	12,0

above 18 tonnes or having three or more axles	EURO III	15,7	9,8
	EURO IV	10,6	6,6
	EURO V	10,2	5,2
	EURO VI	2,8	0,8
	Less polluting than EURO VI	1,4	0,2

(1) 'Suburban' means areas with a population density between 150 and 900 inhabitants/km^2 (median population density of 300 inhabitants/km^2).

(2) 'Interurban' means areas with a population density below150 inhabitants/km^2.

The values of Tables 1 and 2 may be multiplied by a factor of up to 2 in mountain areas and around agglomerations to the extent that it is justified by lower dispersion, the gradient of roads, altitude or temperature inversions.';

(e) in Annex IV, the table with the heading 'Vehicle combinations (articulated vehicles and road trains)' is replaced by the following:

'**VEHICLE COMBINATIONS (ARTICULATED VEHICLES AND ROAD TRAINS)**

Driving axles with air suspension or recognised as equivalent		Other driving axle suspension systems		Damage class
Number of axles and maximum permissible gross laden weight (in tonnes)		Number of axles and maximum permissible gross laden weight (in tonnes)		
Not less than	Less than	Not less than	Less than	
2 + 1 axles				
7,5	12	7,5	12	I
12	14	12	14	
14	16	14	16	
16	18	16	18	
18	20	18	20	
20	22	20	22	
22	23	22	23	
23	25	23	25	
25	28	25	28	
2 + 2 axles				
23	25	23	25	

25 26 28	26 28 29	25 26 28	26 28 29	
29	31	29	31	II
31	33	31	33	
33 36	36 38	33	36	III
2 + 3 axles				II
36 38	38 40	36	38	
		38	40	III
3 + 2 axles				II
36 38	38 40	36	38	
		38 40	40 44	III
40	44			
3 + 3 axles				
36 38	38 40	36	38	I
		38	40	II
40	44	40	44	
7 axles				
40	50	40	50	II
50 60	60	50 60	60	III
8 or 9 axles				
40	50	40	50	I
50	60	50	60	II
60		60		III';

(2) the following Annexes V, VI and VII are added:

'ANNEX V

MINIMUM REQUIREMENTS FOR LEVYING A CONGESTION CHARGE

This Annex sets out the minimum requirements for levying a congestion charge.

1. **The parts of the network subject to congestion charging, vehicles and time periods covered**

Member States shall specify precisely:

(a) the part or parts of their network composed of their share in the trans-European road network and their motorways referred to in Article 7(1), which are to be subject to a congestion charge, in accordance with Article 7da(1) and (3).

(b) the classification of sections of the network which are subject to the congestion charge as "metropolitan" and "non-metropolitan". Member States shall use the criteria set out in Table 1 for the purposes of determining the classification of each road segment.

Table1: Criteria for classifying roads on the network referred to in points (a) as 'metropolitan' and 'non-metropolitan'

Road category	**Classification criterion**
'metropolitan'	Sections of the network running inside agglomerations with a population of 250,000 inhabitants or more
'non-metropolitan'	Sections of the network which are not qualified as 'metropolitan'

(c) the periods during which the charge applies, for each individual segment. Where different charge levels apply throughout the charging period, Member States shall clearly specify the beginning and the end of each period during which a specific charge is applied.

Member States shall use the equivalence factors provided in Table 2 for the purpose of establishing the proportion between charge levels for different vehicle categories:

Table 2: Equivalence factors for establishing the proportion between congestion charge levels for different vehicle categories

Vehicle category	**Equivalence factor**
Light duty vehicles	1
Rigid heavy goods vehicles	1.9
Buses and coaches	2.5
Articulated heavy goods vehicles	2.9

2. **Amount of the charge**

For each vehicle category, road segment and time period, the Member State or, where appropriate, an independent authority shall determine a single specific amount, set in accordance with the provisions of Section 1 of this Annex, taking into account the corresponding maximum value set out in the table in Annex VI. The resulting charging structure shall be transparent, made public and available to all users on equal terms.

The Member State shall publish all of the following in a timely manner before implementing a congestion charge:

(a) all parameters, data and other information necessary to understand how the classification of roads and vehicles and determination of periods of application of the charge are established;

(b) the complete description of congestion charges applying to each vehicle category on each road segment and for each time period.

Member States shall make available to the Commission all information to be published pursuant to points (a) and (b).

The charge shall be set only after having considered the risk of traffic diversion together with any adverse effects on road safety, the environment and congestion, and any solutions to mitigate these risks.

The Member State or, where appropriate, an independent authority, shall monitor the effectiveness of the charging scheme in reducing congestion. It shall adjust every year, where appropriate, the charging structure, charging period(s) and the specific amount of the charge set for each given category of vehicle, type of road and period to the changes in transport supply and demand.

ANNEX VI

MAXIMUM LEVEL OF CONGESTION CHARGE

This Annex sets out the maximum level of congestion charge.

The maximum levels provided for in the table below shall be applied to light duty vehicles. Charges for other vehicle categories shall be established by multiplying the charge applied to light duty vehicles by the equivalence factors provided in the table in Annex V.

Table: Maximum level of congestion charge for light duty vehicles

cent/vehicle-kilometre	**Metropolitan**	**Non-metropolitan**
Motorways	67	34
Main roads	198	66

ANNEX VII

VARIATION OF TOLLS AND USER CHARGES FOR LIGHT DUTY VEHICLES

This Annex specifies the emission categories according to which tolls and user charges shall be differentiated.

Pollutant emissions shall be measured in accordance with Commission Regulation (EU) …/…*.

The lower rates shall apply for any passenger car and light commercial vehicle with specific CO_2 emissions, as measured in accordance with Regulation (EC) No 715/2007of the European Parliament and of the Council**, that are below the levels corresponding to the applicable EU fleet wide targets set out in Regulation (EC) No 443/2009of the European Parliament and of the Council*** and Regulation (EU) No 510/2011of the European Parliament and of the Council****.

Table: emission categories of light duty vehicles

Conformity factor	**1.5-2.1**	**1-1.5**	**below 1**	**Zero-emission vehicles**
Charge per km	10% below highest rate	20% below highest rate	30% below highest rate	75% below highest rate

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* COMMISSION REGULATION (EU) …/… of XXX amending Commission Regulation (EU) 2017/xxx and Directive 2007/46/EC of the European Parliament and of the Council as regards real-driving emissions from light passenger and commercial vehicles (Euro 6) [RDE 3] (OJ L …, ……..2017, p. …).

** Regulation (EC) No 715/2007 of the European Parliament and of the Council of 20 June 2007 on type approval of motor vehicles with respect to emissions from light passenger and commercial vehicles (Euro 5 and Euro 6) and on access to vehicle repair and maintenance information (OJ L 171, 29.6.2007, p. 1).

*** Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO 2 emissions from light-duty vehicles (OJ L 140, 5.6.2009, p. 1).

**** Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO 2 emissions from light-duty vehicles (OJ L 140, 5.6.2009, p. 1).'.