Outputs

Policy Scenario Summary

Policy Scenario comparison (includes Cars and Goods vehicles)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Notes
Costs																
Tax foregone in policy scenario (incl. VAT) (M€)	22.6	24.7	26.2	27.1	28.4	28.9	29.1	28.9	28.9	29.0	28.1	27.8	27.5	27.3	27.0	Negative figures mean more tax revenue raised in high biofuel scenario
Signage replacement (M€)	0.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Value of time (M€)	106.4	120.3	127.5	131.6	135.7	137.9	140.2	142.4	144.6	147.0	145.8	144.7	143.5	142.3	141.2	
Cost to producers (inc. VAT) (M€)	4.8	5.2	5.4	5.5	5.7	5.8	5.9	6.0	6.1	6.1	6.1	6.0	6.0	6.0	5.9	
Total cost (inc. VAT) (M€)	133.8	151.1	159.1	164.2	169.9	172.7	175.2	177.3	179.6	182.1	180.0	178.5	177.0	175.6	174.1	
Benefits																
Consumer fuel savings (incl. taxes and VAT) (M€)	47.1	52.1	55.9	58.1	61.5	64.0	66.4	65.3	65.8	67.7	67.2	68.5	71.7	74.9	76.2	
Air quality benefits (M€)	3.1	3.4	3.6	3.8	3.9	4.0	4.0	4.1	4.1	4.2	4.2	4.1	4.1	4.1	4.1	
Accident savings (M€)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total benefit (inc. VAT) (M€)	50.2	55.5	59.5	61.9	65.4	67.9	70.4	69.4	69.9	71.9	71.3	72.6	75.8	79.0	80.2	
Petrol saved (M.litres)	6.714	6.872	7.147	7.312	7.577	7.720	7.864	8.008	8.151	8.295	8.129	7.964	7.798	7.633	7.468	
Diesel saved (M.litres)	33.287	37.166	39.794	41.242	43.474	44.217	44.960	45.703	46.446	47.190	47.034	46.878	46.723	46.567	46.411	
Fuel saved (M.litres)	40.0	44.0	46.9	48.6	51.1	51.9	52.8	53.7	54.6	55.5	55.2	54.8	54.5	54.2	53.9	
Petrol Energy Savings (GWh)	-61.3	-62.7	-65.2	-66.7	-69.2	-70.5	-71.8	-73.1	-74.4	-75.7	-74.2	-72.7	-71.2	-69.7	-68.2	
Diesel Energy Savings (GWh)	-331.6	-370.2	-396.4	-410.9	-433.1	-440.5	-447.9	-455.3	-462.7	-470.1	-468.6	-467.0	-465.5	-463.9	-462.4	
Cumulative petrol energy savings (GWh)	-61.3	-124.0	-189.2	-256.0	-325.1	-395.6	-467.4	-540.4	-614.8	-690.5	-764.7	-837.4	-908.6	-978.3	-1046.4	
Cumulative diesel energy savings (GWh)	-331.6	-701.9	-1098.3	-1509.1	-1942.2	-2382.7	-2830.6	-3285.9	-3748.6	-4218.7	-4687.3	-5154.3	-5619.8	-6083.7	-6546.0	
		-701.9	-1098.3	-1509.1	-1942.2	-2382.7	-2830.6	-3285.9	-3748.6	-4218.7	-4687.3	-5154.3	-5619.8	-6083.7	-6546.0	

Total undiscounted costs (M€)	2416.4
Total undiscounted benefits (M€)	970.9
Economic undiscounted cost (€M)	1445.4
Cumulative CO_2 emissions savings 2017 to 2030 (kt)	1888.9
Economic cost per tonne (€/tonne)	765
Exchequer cost per tonne (€/tonne)	206

Baseline - 120km/h

Fuel consumption	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Car petrol consumption (million litres)	206	210	219	224	232	236	241	245	250	254	249	244	239	234	229
Car diesel consumption (million litres)	268	292	303	310	316	318	321	323	326	329	325	320	316	312	308
LGV diesel consumption (million litres)	132	150	164	171	183	187	191	195	199	203	204	204	204	205	205
HGV diesel consumption (million litres)	117	132	144	150	162	165	169	172	176	179	179	180	180	180	180
Total fuel consumption (million litres)	723	785	830	855	893	907	922	936	951	965	957	948	939	930	922

Fuel price breakdown	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
NORA levy (€/litre fuel) (excl. VAT)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Carbon tax (€/tonneCO2) (excl. VAT)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Petrol carbon tax (€/litre) (excl. VAT)	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
Diesel carbon tax (€/litre) (excl. VAT)	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053
Petrol excise duty (€/litre) (excl. VAT)	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542
Diesel excise duty (€/litre) (excl. VAT)	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426
Better energy levy (€/litre) (excl. VAT)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Ethanol price premium (€/litre) (excl. VAT)	0.015	0.018	0.018	0.017	0.017	0.017	0.016	0.016	0.016	0.015	0.015	0.015	0.015	0.015	0.015
Biodiesel price premium (€/litre) (excl. VAT)	0.030	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.037	0.037	0.037	0.037	0.037	0.037
VAT rate	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%

Fuel taxes raised - Cars	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Notes
Total NORA levy (M€) (excl. VAT)	9.5	10.0	10.4	10.7	11.0	11.1	11.2	11.4	11.5	11.7	11.5	11.3	11.1	10.9	10.7	
Total petrol carbon tax (M€) (excl. VAT)	9.3	9.6	9.9	10.2	10.5	10.7	10.9	11.1	11.3	11.5	11.3	11.1	10.8	10.6	10.4	
Total diesel carbon tax (M€) (excl. VAT)	14.2	15.5	16.1	16.4	16.7	16.9	17.0	17.1	17.3	17.4	17.2	17.0	16.8	16.5	16.3	
Total petrol excise duty (M€) (excl. VAT)	111.4	114.0	118.6	121.3	125.7	128.1	130.5	132.9	135.2	137.6	134.9	132.1	129.4	126.6	123.9	
Total diesel excise duty (M€) (excl. VAT)	114.2	124.2	129.0	132.2	134.4	135.5	136.6	137.7	138.8	139.9	138.1	136.4	134.6	132.8	131.0	
Total better energy levy (M€) (excl. VAT)	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.6	
Total taxes (M€) (excl. VAT)	259	274	285	291	299	303	307	311	315	319	314	309	303	298	293	
Total taxes (M€) (incl. VAT)	319	337	350	358	368	373	378	382	387	392	386	379	373	367	360	Assumes diesel VAT rebate claimed by proportion of diesel consumers
Total wholesale fuel cost (M€) (incl. VAT)	242	259	272	282	292	311	331	350	370	391	403	415	426	436	446	
Total wholesale fuel cost (M€) (excl. VAT)	200	215	226	233	242	258	274	290	306	323	334	343	352	361	369	
VAT on wholesale fuel price (M€)	42	45	47	49	50	54	57	60	64	67	70	72	73	75	77	

Fuel taxes raised - LGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total NORA levy (M€) (excl. VAT)	2.6	3.0	3.3	3.4	3.7	3.7	3.8	3.9	4.0	4.1	4.1	4.1	4.1	4.1	4.1
Total petrol carbon tax (M€) (excl. VAT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total diesel carbon tax (M€) (excl. VAT)	7.0	8.0	8.7	9.0	9.7	9.9	10.1	10.4	10.6	10.8	10.8	10.8	10.8	10.8	10.9
Total petrol excise duty (M€) (excl. VAT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total diesel excise duty (M€) (excl. VAT)	56.4	63.9	69.7	72.7	78.1	79.8	81.5	83.2	84.9	86.6	86.7	86.8	86.9	87.1	87.2
Total better energy levy (M€) (excl. VAT)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total taxes (M€) (excl. VAT)	66	75	82	85	92	94	96	98	100	102	102	102	102	102	102
Total taxes (M€) (incl. VAT)	81	92	101	105	113	115	118	120	123	125	125	125	126	126	126
Total wholesale fuel cost (M€) (incl. VAT)	67	77	84	89	97	104	111	119	127	135	141	148	155	161	168
Total wholesale fuel cost (M€) (excl. VAT)	54	62	69	72	79	84	90	97	103	109	115	120	126	131	137
VAT on wholesale fuel price (M€)	12	14	16	17	18	19	21	22	24	25	26	28	29	30	31

Diesel rebate scheme - LGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Diesel price (€ per litre incl taxes)	1.16	1.16	1.17	1.18	1.19	1.21	1.24	1.27	1.29	1.32	1.35	1.38	1.42	1.45	1.48
Diesel consumption (million litres)	132	150	164	171	183	187	191	195	199	203	204	204	204	205	205
Diesel rebate (M€)	0	0	0	0	0	0	2	2	2	4	6	6	9	11	11

Fuel taxes raised - HGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total NORA levy (M€) (excl. VAT)	2.3	2.6	2.9	3.0	3.2	3.3	3.4	3.4	3.5	3.6	3.6	3.6	3.6	3.6	3.6
Total petrol carbon tax (M€) (excl. VAT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total diesel carbon tax (M€) (excl. VAT)	6.2	7.0	7.6	8.0	8.6	8.7	8.9	9.1	9.3	9.5	9.5	9.5	9.5	9.5	9.6
Total petrol excise duty (M€) (excl. VAT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total diesel excise duty (M€) (excl. VAT)	49.6	56.3	61.3	64.0	68.8	70.3	71.8	73.3	74.8	76.3	76.4	76.5	76.6	76.7	76.8
Total better energy levy (M€) (excl. VAT)	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total taxes (M€) (excl. VAT)	58	66	72	75	81	83	84	86	88	90	90	90	90	90	90
Total taxes (M€) (incl. VAT)	72	81	89	92	99	102	102	101	101	100	97	97	97	97	97
VAT paid (M€)	13	15	17	17	19	19	18	15	13	11	7	7	7	7	7
Total wholesale fuel cost (M€) (incl. VAT)	59	67	74	78	85	91	98	105	111	119	124	130	136	142	148
Total wholesale fuel cost (M€) (excl. VAT)	48	55	60	64	69	74	80	85	91	96	101	106	111	116	120
VAT on wholesale fuel price (M€)	11	13	14	15	16	17	18	20	21	22	23	24	25	27	28

Diesel rebate scheme - HGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Diesel price (€ per litre incl taxes)	1.16	1.16	1.17	1.18	1.19	1.21	1.24	1.27	1.29	1.32	1.35	1.38	1.42	1.45	1.48
Diesel consumption (million litres)	117	132	144	150	162	165	169	172	176	179	179	180	180	180	180
Diesel rebate (M€)	0	0	0	0	0	0	2	5	7	10	13	13	13	14	14

Scenario - 110km/h

Fuel consumption (million litres)	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Notes
Car petrol consumption (million litres)	196	200	208	213	221	225	229	233	238	242	237	232	227	223	218	Assumotion .
Car diesel consumption (million litres)	250	271	282	289	294	296	299	301	303	306	302	298	294	290	286	Assumotion .
LGV diesel consumption (million litres)	114	130	141	147	158	162	165	169	172	175	176	176	176	176	177	
HGV diesel consumption (million litres)	107	121	132	138	148	151	155	158	161	164	165	165	165	165	165	
Total fuel consumption (million litres)	666	723	764	787	821	834	848	861	874	887	879	871	863	854	846	

Calculation Formulae

$v_p=(v_e(1-t_e))/t_e$

$v_d=(v_b(1-t_b))/t_b$

$v_e=(E_P t_e)/((1-t_e)\partial_p+\partial_e t_e)$

$v_b=(E_D t_b)/((1-t_b)\partial_d+\partial_b t_b)$

Fuel price breakdown	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
NORA levy (€/litre fuel) (excl. VAT)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
Carbon tax (€/tonneCO2) (excl. VAT)	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20
Petrol carbon tax (€/litre) (excl. VAT)	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
Diesel carbon tax (€/litre) (excl. VAT)	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053	0.053
Petrol excise duty (€/litre) (excl. VAT)	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542	0.542
Diesel excise duty (€/litre) (excl. VAT)	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426	0.426
Better energy levy (€/litre) (excl. VAT)	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Ethanol price premium (€/litre) (excl. VAT)	0.015	0.018	0.018	0.017	0.017	0.017	0.016	0.016	0.016	0.015	0.015	0.015	0.015	0.015	0.015
Biodiesel price premium (€/litre) (excl. VAT)	0.030	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.037	0.037	0.037	0.037	0.037	0.037
VAT rate	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%	23%

Fuel taxes raised - Cars	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Notes
Total NORA levy (M€) (excl. VAT)	8.9	9.4	9.8	10.0	10.3	10.4	10.6	10.7	10.8	11.0	10.8	10.6	10.4	10.3	10.1	
Total petrol carbon tax (M€) (excl. VAT)	8.9	9.1	9.5	9.7	10.0	10.2	10.4	10.6	10.8	11.0	10.8	10.5	10.3	10.1	9.9	
Total diesel carbon tax (M€) (excl. VAT)	13.2	14.4	14.9	15.3	15.6	15.7	15.8	15.9	16.1	16.2	16.0	15.8	15.6	15.4	15.2	Assumes diesel rebate claimed by proportion of diesel consumers
Total petrol excise duty (M€) (excl. VAT)	106.0	108.5	112.9	115.5	119.7	121.9	124.2	126.5	128.7	131.0	128.4	125.8	123.2	120.6	117.9	
Total diesel excise duty (M€) (excl. VAT)	106.3	115.5	120.0	123.0	125.0	126.1	127.1	128.1	129.1	130.2	128.5	126.9	125.2	123.6	121.9	
Total better energy levy (M€) (excl. VAT)	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	
Total taxes (M€) (excl. VAT)	244	258	268	274	281	285	289	292	296	300	295	290	285	280	276	
Total taxes (M€) (incl. VAT)	300	317	329	337	346	350	355	360	364	369	363	357	351	345	339	
Total wholesale fuel cost (M€) (incl. VAT)	228	244	256	265	275	292	311	329	348	367	379	390	400	410	419	
Total wholesale fuel cost (M€) (excl. VAT)	185	198	208	215	223	238	253	268	283	299	308	317	325	333	341	
VAT on wholesale fuel price (M€)	43	46	48	50	51	55	58	62	65	69	71	73	75	77	78	

Fuel taxes raised - LGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total NORA levy (M€) (excl. VAT)	2.3	2.6	2.8	2.9	3.2	3.2	3.3	3.4	3.4	3.5	3.5	3.5	3.5	3.5	3.5
Total petrol carbon tax (M€) (excl. VAT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total diesel carbon tax (M€) (excl. VAT)	6.0	6.9	7.5	7.8	8.4	8.6	8.7	8.9	9.1	9.3	9.3	9.3	9.3	9.3	9.4
Total petrol excise duty (M€) (excl. VAT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total diesel excise duty (M€) (excl. VAT)	48.6	55.1	60.1	62.7	67.4	68.8	70.3	71.8	73.2	74.7	74.8	74.9	75.0	75.1	75.2
Total better energy levy (M€) (excl. VAT)	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total taxes (M€) (excl. VAT)	57	65	71	74	79	81	83	84	86	88	88	88	88	88	88
Total taxes (M€) (incl. VAT)	70	80	87	91	97	99	102	104	106	108	108	108	108	108	109
Total wholesale fuel cost (M€) (incl. VAT)	58	66	73	77	83	89	96	102	109	116	122	128	133	139	145
Total wholesale fuel cost (M€) (excl. VAT)	47	54	59	62	68	73	78	83	89	94	99	104	108	113	118
VAT on wholesale fuel price (M€)	11	12	14	14	16	17	18	19	20	22	23	24	25	26	27

Fuel taxes raised - HGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total NORA levy (M€) (excl. VAT)	2.1	2.4	2.6	2.8	3.0	3.0	3.1	3.2	3.2	3.3	3.3	3.3	3.3	3.3	3.3
Total petrol carbon tax (M€) (excl. VAT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total diesel carbon tax (M€) (excl. VAT)	5.7	6.4	7.0	7.3	7.9	8.0	8.2	8.4	8.5	8.7	8.7	8.7	8.7	8.8	8.8
Total petrol excise duty (M€) (excl. VAT)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total diesel excise duty (M€) (excl. VAT)	45.5	51.7	56.3	58.7	63.1	64.5	65.8	67.2	68.6	70.0	70.1	70.1	70.2	70.3	70.4
Total better energy levy (M€) (excl. VAT)	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Total taxes (M€) (excl. VAT)	53	61	66	69	74	76	77	79	81	82	82	82	82	83	83
Total taxes (M€) (incl. VAT)	66	75	81	85	91	93	94	96	98	98	96	96	95	93	93
VAT paid (M€)	12	14	15	16	17	17	16	17	17	16	14	14	12	10	10
Total wholesale fuel cost (M€) (incl. VAT)	54	62	68	72	78	84	90	96	102	109	114	120	125	130	136
Total wholesale fuel cost (M€) (excl. VAT)	44	50	55	58	63	68	73	78	83	88	93	97	102	106	110
VAT on wholesale fuel price (M€)	10	12	13	13	15	16	17	18	19	20	21	22	23	24	25

Diesel rebate scheme - LGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Diesel price (€ per litre incl taxes)	1.16	1.16	1.17	1.18	1.19	1.21	1.24	1.27	1.29	1.32	1.35	1.38	1.42	1.45	1.48
Diesel consumption (million litres)	114	130	141	147	158	162	165	169	172	175	176	176	176	176	177
Diesel rebate (M€)	0	0	0	0	0	0	1	5	7	9	13	13	13	13	13

Diesel rebate scheme - HGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Diesel price (€ per litre incl taxes)	1.16	1.16	1.17	1.18	1.19	1.21	1.24	1.27	1.29	1.32	1.35	1.38	1.42	1.45	1.48
Diesel consumption (million litres)	107	121	132	138	148	151	155	158	161	164	165	165	165	165	165
Diesel rebate (M€)	0	0	0	0	0	0	1	1	1	3	5	5	7	9	9

Consumer fuel savings	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Notes
Total paid for petrol incl. taxes (M€)	12.7	13.1	13.7	14.0	14.6	15.2	15.8	16.4	17.1	17.7	17.7	17.8	17.8	17.7	17.7	
Total paid for diesel incl. taxes (M€)	21.6	23.6	24.7	25.5	26.1	26.9	27.7	28.6	29.4	30.3	30.6	30.9	31.2	31.5	31.8	
Total paid for fuel incl. taxes (M€)	34	37	38	40	41	42	44	45	46	48	48	49	49	49	49	

Other fuel savings	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Total paid for diesel incl. taxes (M€) - LGV	21.1	24.0	26.4	27.7	29.9	31.3	32.7	34.1	35.5	37.0	37.9	38.9	39.8	40.8	41.7
Total paid for diesel incl. taxes (M€) - HGV	11.1	12.7	13.9	14.6	15.8	16.5	17.3	18.0	18.8	19.6	20.1	20.6	21.1	21.6	22.1
Total paid for fuel incl. taxes (M€)	32	37	40	42	46	48	50	52	54	57	58	59	61	62	64

Air quality benefits - Cars	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PM savings (M€)	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.4
NOx savings (M€)	1.5	1.6	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.8	1.8	1.8	1.8	1.7
Total (M€)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2

Air quality benefits - LGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PM savings (M€)	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NOx savings (M€)	0.5	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Total (M€)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Air quality benefits - HGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PM savings (M€)	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
NOx savings (M€)	0.6	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.9	0.9
Total (M€)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Private revenue loss - Cars	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Notes
Retailer revenue foregone incl. taxes (M€)	1.1	1.2	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.3	Premium paid based on level of biofuel blend
Wholesaler revenue foregone incl. taxes (M€)	2.3	2.4	2.5	2.6	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.7	2.7	2.6	2.6	Premium paid based on level of biofuel blend
Total revenue foregone incl. taxes (M€)	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	Some diesel eligible for VAT rebate

Private revenue loss - LGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Retailer revenue foregone incl. taxes (M€)	0.7	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Wholesaler revenue foregone incl. taxes (M€)	1.5	1.7	1.8	1.9	2.0	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.3	2.3
Total revenue foregone incl. taxes (M€)	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3

Private revenue loss - HGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Retailer revenue foregone incl. taxes (M€)	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
Wholesaler revenue foregone incl. taxes (M€)	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Total revenue foregone incl. taxes (M€)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Administration costs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Signage replacement (M€)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Value of time - Cars	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
In-work (M€)	26.0	27.6	28.7	29.4	30.1	30.4	30.8	31.2	31.5	31.9	31.4	30.9	30.4	29.9	29.4
Leisure (M€)	24.5	26.0	27.0	27.7	28.4	28.7	29.0	29.4	29.7	30.1	29.6	29.2	28.7	28.2	27.8
Commuting (M€)	44.1	46.8	48.7	49.9	51.0	51.7	52.3	52.9	53.5	54.2	53.3	52.5	51.7	50.8	50.0
Total (M€)	94.5	104.1	108.2	110.8	111.9	113.2	114.6	116.0	117.4	118.8	117.0	115.2	113.3	111.5	109.6

Value of time - LGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
In-work (M€)	4.1	4.7	5.1	5.3	5.7	5.9	6.0	6.1	6.2	6.4	6.4	6.4	6.4	6.4	6.4
Leisure (M€)	3.9	4.4	4.8	5.0	5.4	5.5	5.6	5.8	5.9	6.0	6.0	6.0	6.0	6.0	6.0
Commuting (M€)	7.0	8.0	8.7	9.1	9.7	9.9	10.2	10.4	10.6	10.8	10.8	10.8	10.8	10.8	10.9
Total (M€)	15.0	17.7	19.3	20.1	21.3	21.8	22.2	22.7	23.2	23.7	23.7	23.7	23.8	23.8	23.8

Value of time - HGVs	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
In-work (M€)	37.5	42.5	46.3	48.3	52.0	53.1	54.2	55.3	56.5	57.6	57.7	57.8	57.8	57.9	58.0
Total (M€)	37.5	44.1	48.0	50.1	53.1	54.3	55.4	56.6	57.7	58.9	59.0	59.1	59.2	59.2	59.3

Policy Scenario Comparison with Baseline - Cars

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	Notes
Costs																
Tax foregone in policy scenario (incl. VAT) (M€)	12	13	14	14	14	14	14	15	15	15	15	14	14	14	14	Positive value means lower tax take in policy scenario - negative value means extra revenues raised in policy scenario
Signage replacement (M€)	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	
Value of time (M€)	64	71	74	75	76	77	78	79	80	81	80	78	77	76	75	
Cost to producers (inc. VAT) (M€)	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	Positive value means more tax paid in policy scenario
Total cost (inc. VAT) (M€)	79	87	90	92	93	94	95	96	97	99	97	95	94	92	91	
Benefits																
Consumer fuel savings (incl. taxes and VAT) (M€)	23	25	26	27	28	29	30	31	32	33	33	33	33	33	34	
Air quality benefits (M€)	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Accident savings (M€)																
Total benefit (inc. VAT) (M€)	25	27	28	29	30	31	32	33	34	35	35	35	36	36	36	
Petrol saved (M.litres)	7	7	7	7	8	8	8	8	8	8	8	8	8	8	7	
Diesel saved (M.litres)	13	14	14	15	15	15	15	15	15	16	15	15	15	15	15	

Total undiscounted costs (M€)	1,313
Total undiscounted benefits (M€)	456
Overall undiscounted cost (€M)	857
Total CO_2 emissions savings (kt)	799
Average cost per tonne (€/tonne)	1,072

Policy Scenario Comparison with Baseline - LGVs

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Costs															
Tax foregone in policy scenario (incl. VAT) (M€)	6	7	8	8	9	9	9	11	13	13	14	14	13	11	11
Signage replacement (M€)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Value of time (M€)	10	12	13	14	14	15	15	15	16	16	16	16	16	16	16
Cost to producers (inc. VAT) (M€)	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Total cost (inc. VAT) (M€)	18	21	23	24	25	26	26	29	31	32	33	33	31	30	30
Tax foregone in policy scenario (incl. VAT) (M€)															
Business fuel savings (incl. taxes and VAT) (M€)	14	16	18	19	20	21	22	23	24	25	26	26	27	28	28
Air quality benefits (M€)	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Accident savings (M€)															
Total benefit (inc. VAT) (M€)	15	17	19	20	21	22	23	24	25	26	27	27	28	29	29
Diesel saved (M.litres)	12	14	15	16	17	18	18	18	19	19	19	19	19	19	19

Total undiscounted costs (M€)	391
Total undiscounted benefits (M€)	337
Overall undiscounted cost (€M)	54
Total CO_2 emissions savings (kt)	656
Average cost per tonne (€/tonne)	596

Policy Scenario Comparison with Baseline - HGVs

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Costs															
Tax foregone in policy scenario (incl. VAT) (M€)	€4.09	€4.64	€5.06	€5.28	€5.67	€5.80	€5.81	€2.86	€1.13	€0.58	-€0.94	-€0.94	€0.74	€2.42	€2.43
Signage replacement (M€)	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00	€0.00
Value of time (M€)	€31.86	€37.45	€40.80	€42.57	€45.13	€46.11	€47.09	€48.07	€49.05	€50.08	€50.15	€50.22	€50.29	€50.35	€50.42
Cost to producers (inc. VAT) (M€)	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98	€0.98
Total cost (inc. VAT) (M€)	€36.93	€43.08	€46.84	€48.82	€51.79	€52.89	€53.89	€51.92	€51.16	€51.65	€50.19	€50.26	€52.01	€53.76	€53.83
Benefits															
Business fuel savings (incl. taxes and VAT) (M€)	€9.46	€10.80	€11.85	€12.44	€13.45	€14.06	€14.55	€11.57	€10.03	€9.90	€8.53	€8.94	€11.34	€13.74	€14.16
Air quality benefits (M€)	€0.60	€0.68	€0.74	€0.77	€0.83	€0.84	€0.86	€0.88	€0.90	€0.92	€0.92	€0.92	€0.92	€0.92	€0.92
Accident savings (M€)															
Total benefit (inc. VAT) (M€)	€10.06	€11.48	€12.58	€13.21	€14.28	€14.90	€15.42	€12.45	€10.93	€10.82	€9.45	€9.86	€12.26	€14.66	€15.08
Diesel saved (M.litres)	8	9	10	11	11	12	12	12	12	13	13	13	13	13	13

Total undiscounted costs (M€)	712
Total undiscounted benefits (M€)	177
Overall undiscounted cost (€M)	535
Total CO_2 emissions savings (kt)	434
Average cost per tonne (€/tonne)	1,233