POCKETBOOKS

2005 EDITION

Energy, transport and environment indicators

Data 1992-2002

ISBN 92-894-7594-3
ISSN 1725-4566
Cat. No. KS-DK-05-001-EN-N

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THEME Transport

THEME Environment and energy

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Luxembourg: Office for Official Publications of the European Communities, 2005

ISBN 92-894-7594-3
ISSN 1725-4566

Introduction

Energy, Transport and Environment Indicators

The third edition of this publication, like the previous two, presents facts and figures from the energy, transport and environment sectors, all in a single volume.
The pocketbook contains three chapters of selected indicators for Energy, Transport and Environment issues. Energy indicators include energy supply, final energy consumption, renewable energy sources, the structure of the energy industry, energy efficiency, and energy prices. Transport indicators cover infrastructure, equipment, transport of passengers and freight and road safety. The Environment chapter includes indicators on climate change and greenhouse gases emissions, air pollution, municipal waste, water use, environmental protection and environmental accounts. The bulk of data on emissions have been provided by the European environment Agency (EEA).In the majority of cases the indicators contain national data for the 25 EU Member States, the EFTA and candidate countries, covering several years. Where aggregated data for the 15 old EU Member States and for the 25 EU Member States are available, these are presented for the whole period from 1992 to 2002 (for transport, mainly the six year period up to 2002). The main data source for the indicators is the harmonised EU Energy Statistics, although other official Eurostat data sources, such as the Eurostat/OECD Joint Questionnaire on the state of the environment have also been used. The bulk of data on emissions have been provided by the European Environment Agency while the most important data sources for transport indicators are the EU legal acts on transport statistics and the Eurostat/UNECE/ECMT Common Questionnaire.

For detailed data please check:
– free data available on the Eurostat web site at http://europa.eu.int/comm/eurostat/ and EEA web site at http://www.eea.eu.int
- DG Energy and Transport web site http://europa.eu.int/comm/energy_transport/etif/ where the DG TREN pocketbook is published and updated on a regular basis at
- DG Environment web site at http://europa.eu.int/comm/environment/index_en.htm on the environmental policy context of the indicators presented

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Original language:
English

Translations:
European Commission Translation Service

Data requests:
See list of datashops at end of publication.

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Symbols and abbreviations

:	no data available
0	figure less than half of the unit used
-	not applicable or real zero or zero by default
%	percentage
1234	*Estimates are printed in italic*

Units of measurement

ECU	European currency unit, data up to 31.12.1998
EUR	euro, data from 1.1.1999 on
GJ	Giga Joule
GWh	Gigawatt hour
kg	kilogram
km	kilometre
km^2	square kilometre
m^3	cubic metre
mio	million (10^6)
pkm	passenger-kilometre
tkm	tonne-kilometre
t	tonne
toe	tonne of oil equivalent
TOP	Tropospheric ozone precursors
TOFP	Tropospheric ozone forming potential

Chemical and related symbols

CH_4	Methane
CO_2	Carbon dioxide
HFC	Hydrofluorocarbons
NH_3	Ammonia
N_2O	Nitrous oxide
NOx	Nitrogen oxides
PFC	Perfluorocarbons
SF_6	Sulphur hexafluoride
SO_2	Sulphur dioxide

Other abbreviations

EEA	European Environment Agency
ECMT	European Conference of Ministers of Transport
GDP	Gross Domestic Product
GDP in PPS	Gross Domestic Product in Purchasing Power Standard
IEA	International Energy Agency
NACE	Statistical Classification of economic activities in the European Community
OECD	Organisation for Economic Co-operation and Development
OJ	Official Journal of the European Union
OPEC	Organisation of the Petroleum Exporting Countries
UIC	Union International des Chemins de fer
UN	United Nations
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change

Abbreviations of Countries

EU-25	The twenty five Member States of the EU
EU-15	The old fifteen Member States of the EU (before the enlargement of the EU on 1st May 2004)
EFTA	European Free Trade Association
BE	Belgium
CZ	Czech Republic
DK	Denmark
DE	Germany
EE	Estonia
EL	Greece
ES	Spain
FR	France
IE	Ireland
IT	Italy
CY	Cyprus
LV	Latvia
LT	Lithuania
LU	Luxembourg
HU	Hungary
MT	Malta
NL	Netherlands
AT	Austria
PL	Poland
PT	Portugal
SI	Slovenia
SK	Slovakia
FI	Finland
SE	Sweden
UK	United Kingdom
IS	Iceland
LI	Liechtenstein
NO	Norway
CH	Switzerland
BG	Bulgaria
RO	Romania
TR	Turkey

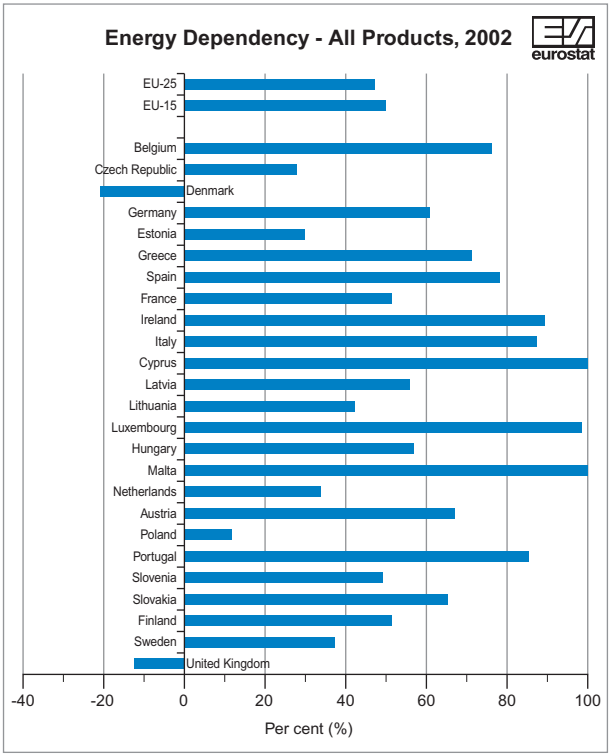
ENERGY INDICATORS

Energy Dependency - All Products

Per cent (%)

	1992	1997	2002
EU-25	**46.5**	**45.3**	**48.1**
EU-15	**49.7**	**47.9**	**50.4**
Belgium	78.5	78.4	76.4
Czech Republic	16.2	24.6	26.5
Denmark	37.3	17.3	-41.1
Germany	54.5	59.9	60.5
Estonia	33.0	33.5	29.2
Greece	69.0	66.9	70.7
Spain	67.6	71.8	78.2
France	52.4	49.6	51.0
Ireland	66.3	76.6	89.3
Italy	84.2	81.1	86.7
Cyprus	100.7	98.3	100.5
Latvia	99.8	86.9	55.1
Lithuania	63.0	60.3	42.8
Luxembourg	99.4	98.4	99.0
Hungary	46.5	54.0	57.1
Malta	112.6	100.0	100.0
Netherlands	18.0	26.0	33.8
Austria	68.7	66.9	66.1
Poland	4.2	7.1	11.3
Portugal	87.5	86.8	84.1
Slovenia	41.0	54.9	49.8
Slovakia	74.5	73.4	65.3
Finland	55.3	55.9	52.6
Sweden	36.7	38.0	37.3
United Kingdom	4.2	-15.3	-12.1
Iceland	37.0	33.9	27.9
Norway	-536.6	-736.5	-764.6
Bulgaria	56.4	53.2	45.9
Romania	28.6	32.9	25.5
Turkey	50.3	60.0	67.7

Data Source: Eurostat



Per cent (%)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	46.5	44.4	43.2	43.7	44.2	45.3	46.7	45.6	47.3	47.9	48.1
EU-15	49.7	47.5	46.2	46.7	46.9	47.9	49.0	47.8	49.6	50.3	50.4

Data Source: Eurostat

Note: The quantities of fuels delivered to sea-going ships of all flags, including warships, are included. Negative dependency rate indicates a net exporter country. Positive values over 100% indicate stocks build-up during the reference year.

In 2002 the EU-25 energy dependency rate was 48.1%, an increase of about 2% since 1992. Overall, there were annual fluctuations in the energy dependency rate during the period 1992–2002, ranging from 43.1% in 1994 to the highest value of 48.1% in 2002. The trend was similar in the case of EU-15, but constantly 2 to 3 units higher.

Only three countries, Denmark, United Kingdom and Norway (an EFTA country) had a surplus of energy over their own requirements (i.e. negative energy dependency ratio), while eight Member States had an energy dependency ratio of over 75%.

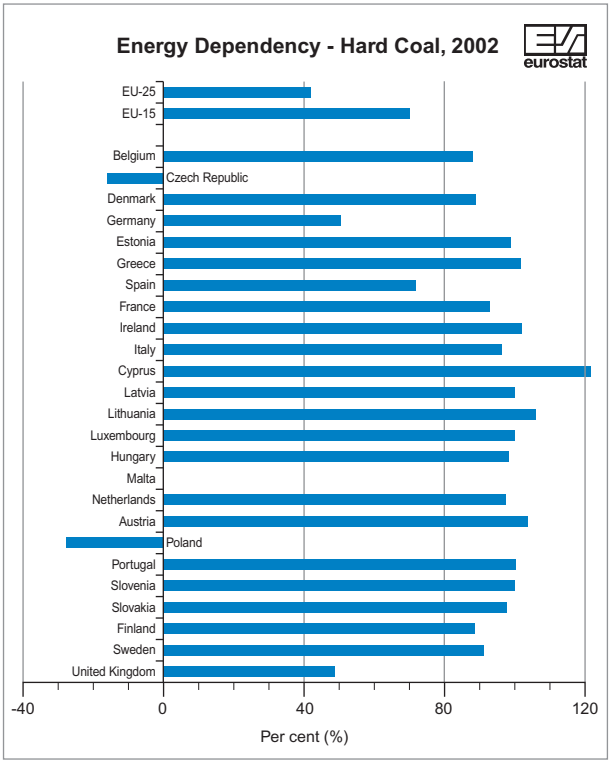
As far as the new Member States are concerned, Poland and the Czech Republic show low energy dependency rates, mainly attributed to their significant production of solid fuels while in the case of Estonia the low energy dependency is attributed just to its lignite production. On the other hand Cyprus and Malta have an energy dependency rate slightly over 100.

Energy Dependency - Hard Coal

Per cent (%)

	1992	1997	2002
EU-25	**28.4**	**30.9**	**42.9**
EU-15	**48.4**	**56.0**	**70.1**
Belgium	95.6	98.5	87.8
Czech Republic	-19.4	-18.7	-16.6
Denmark	108.9	120.7	88.3
Germany	16.2	26.4	50.9
Estonia	109.8	49.0	98.4
Greece	111.2	100.0	102.0
Spain	52.6	41.2	72.3
France	79.9	67.6	93.8
Ireland	104.1	108.5	103.0
Italy	100.5	95.8	95.8
Cyprus	100.0	136.8	122.2
Latvia	97.7	110.1	100.0
Lithuania	139.7	82.4	105.7
Luxembourg	100.0	100.0	100.0
Hungary	67.2	87.0	97.4
Malta	-	-	-
Netherlands	98.9	113.2	97.8
Austria	109.2	92.7	105.1
Poland	-20.8	-25.3	-28.2
Portugal	96.9	103.7	100.0
Slovenia	18.5	86.4	100.0
Slovakia	96.6	107.9	97.8
Finland	85.6	100.5	87.8
Sweden	90.3	107.3	91.6
United Kingdom	21.7	31.4	49.3
Iceland	100.0	100.0	100.0
Norway	68.9	68.0	-170.5
Bulgaria	69.5	96.0	104.4
Romania	69.6	83.4	105.2
Turkey	65.6	83.0	87.5

Data Source: Eurostat



Per cent (%)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	28.4	24.7	24.7	26.5	27.7	30.9	32.9	34.9	38.6	42.8	42.9
EU-15	48.4	45.5	45.7	50.6	51.4	56.0	56.7	60.5	64.6	70.7	70.1

Data Source: Eurostat

Note:Negative dependency rate indicates a net exporter country. Positive values over 100% indicate stocks build-up during the reference year.

The EU-15 and EU-25 hard coal energy dependency rate exhibited a significant increase during the period 1992–2002, up to 70% and 43% respectively. Four of the 25 Member States have a hard coal energy dependency less than 60% (Czech Republic, Germany, Poland and the United Kingdom) while 16 Member States have a hard coal energy dependency greater than 90%. The negative hard coal energy dependency of Czech Republic (-17%) and Poland (-28%) reflects their significant export activity.

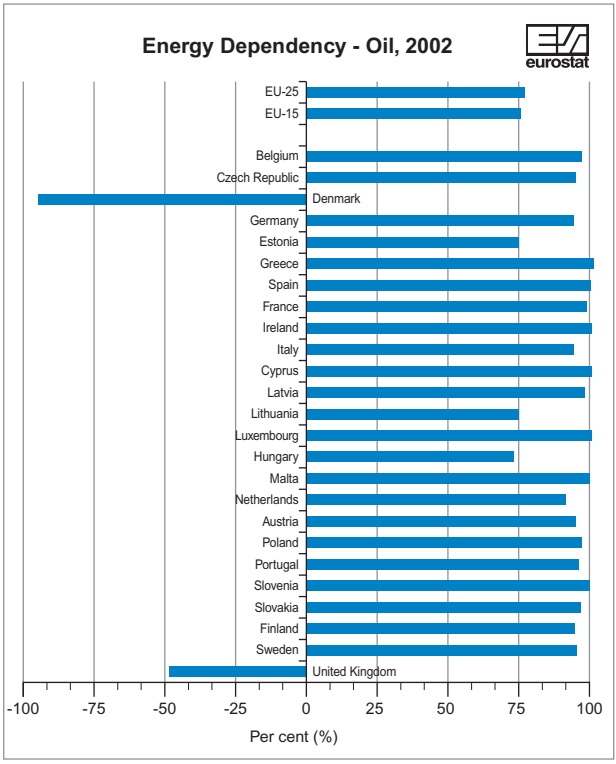
Due to the influence of Czech Republic and Poland the new European Union is now less dependent on coal.

Energy Dependency - Oil

Per cent (%)

	1992	1997	2002
EU-25	**80.8**	**76.2**	**76.8**
EU-15	**79.9**	**74.7**	**75.5**
Belgium	100.1	99.6	98.8
Czech Republic	99.3	104.1	95.2
Denmark	11.5	-6.4	-94.9
Germany	98.1	97.4	95.0
Estonia	95.5	95.3	75.2
Greece	100.7	99.6	102.5
Spain	98.1	100.2	101.2
France	95.2	98.1	99.2
Ireland	98.9	101.6	101.1
Italy	95.2	92.9	94.7
Cyprus	101.0	100.0	102.1
Latvia	95.8	92.7	98.5
Lithuania	90.6	95.5	75.1
Luxembourg	101.4	99.6	100.6
Hungary	70.6	76.7	73.7
Malta	112.6	100.0	100.0
Netherlands	92.4	92.4	91.3
Austria	89.1	89.5	95.1
Poland	98.8	98.7	97.1
Portugal	99.7	100.7	96.7
Slovenia	99.2	102.9	100.0
Slovakia	97.3	99.7	97.2
Finland	94.1	97.6	93.9
Sweden	96.7	100.1	94.8
United Kingdom	-11.6	-58.1	-48.1
Iceland	107.3	98.4	97.3
Norway	-1 161.8	-1 601.4	-1 831.9
Bulgaria	91.2	99.5	98.9
Romania	48.7	54.8	36.5
Turkey	82.9	88.5	91.5

Data Source: Eurostat



Per cent (%)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	80.8	79.2	75.4	74.8	76.0	76.2	77.6	73.5	76.4	78.0	76.8
EU-15	79.9	77.8	74.1	73.2	74.5	74.7	76.1	71.9	75.0	76.9	75.5

Data Source: Eurostat

Note: Negative dependency rate indicates a net exporter country. Positive values over 100% indicate stocks build-up during the reference year.

The EU-15 and EU-25 oil energy dependency rate followed the same trend during the period 1992–2002 which led to the levels of 75.5% and 76.8% respectively.

Denmark and the United Kingdom are the only EU-25 oil exporting countries, while 20 of the Member States are over 90% dependent on imported oil.

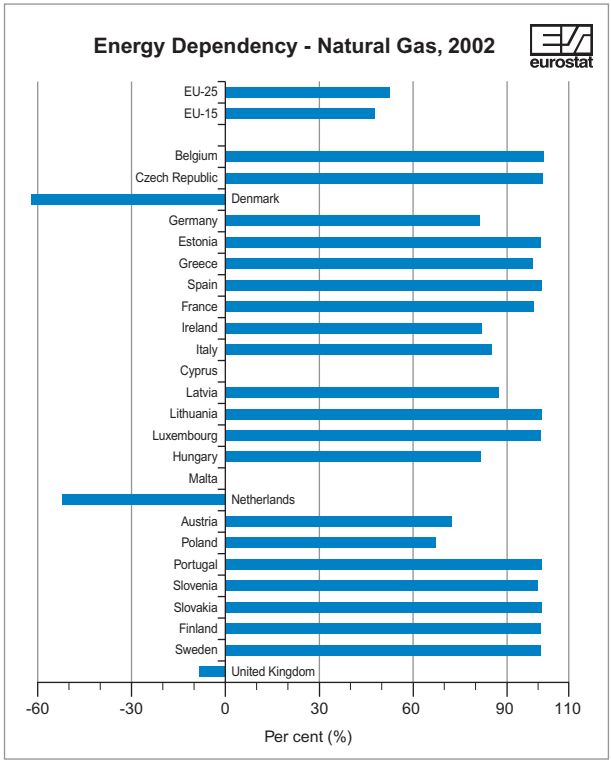
Norway, with an oil energy dependency rate of -1 832% in 2002, is one of the main suppliers of oil to the EU-15, providing more than one hundred million tonnes of crude oil in 2002, representing 21% of EU-15 total crude oil imports.

Energy Dependency - Natural Gas

Per cent (%)

	1992	1997	2002
EU-25	**45.0**	**45.4**	**51.7**
EU-15	**40.2**	**41.0**	**47.8**
Belgium	101.0	100.1	102.1
Czech Republic	94.3	99.2	102.0
Denmark	-63.4	-71.0	-64.5
Germany	77.9	80.8	79.5
Estonia	99.9	100.0	100.0
Greece	-	75.6	97.4
Spain	82.7	102.1	101.0
France	93.5	93.7	98.0
Ireland	0.0	31.2	81.6
Italy	68.8	67.3	84.1
Cyprus	-	-	-
Latvia	123.7	99.4	88.6
Lithuania	100.0	100.0	100.0
Luxembourg	100.0	100.0	100.0
Hungary	52.9	67.5	80.6
Malta	-	-	-
Netherlands	-85.8	-71.5	-51.5
Austria	80.8	78.4	71.4
Poland	68.7	69.9	66.1
Portugal	_	114.5	99.9
Slovenia	97.6	98.7	99.4
Slovakia	96.3	92.5	100.1
Finland	100.0	100.0	100.0
Sweden	100.0	100.0	100.0
United Kingdom	9.3	-0.8	-8.1
Iceland	-	-	-
Norway	-695.7	-945.9	-863.4
Bulgaria	99.9	104.1	103.9
Romania	16.9	25.3	23.5
Turkey	95.7	98.0	97.3

Data Source: Eurostat



Per cent (%)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	45.0	41.5	42.5	44.0	43.4	45.4	46.0	48.5	49.6	47.8	51.7
EU-15	40.2	37.7	38.5	39.8	38.8	41.0	41.7	44.7	45.8	43.9	47.8

Data Source: Eurostat

Note: Negative dependency rate indicates a net exporter country. Positive values over 100% indicate stocks build-up during the reference year.

EU-15 and EU-25 are less dependent on imported natural gas than on oil but there is an increasing trend over the past decade. In 2002 the EU-15 energy dependency rate for natural gas was 48% and 52% for EU-25.

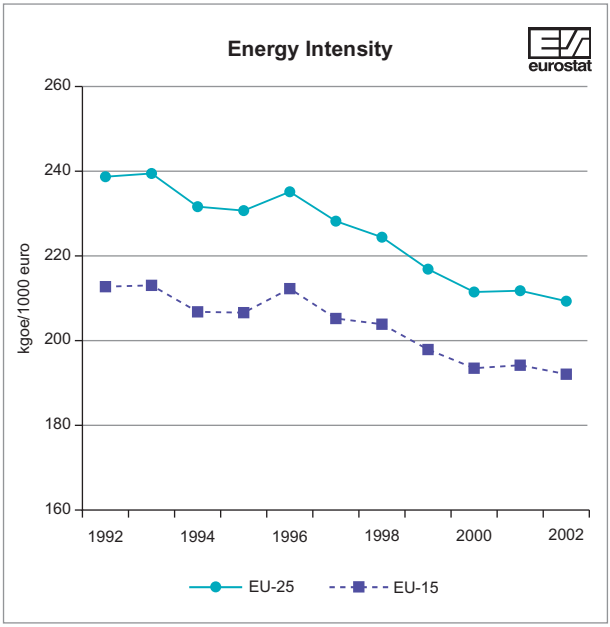
Denmark, Netherlands and the United Kingdom are the only EU-25 natural gas exporting countries, while 13 of the Member States are over ninety percent dependent on imported natural gas; Malta and Cyprus have not introduced natural gas into their energy system.

Norway is also a natural gas exporter with an energy dependency of -863% in 2002. Almost all exports were destined to EU-15 countries representing 27% of their total natural gas imports.

Energy Intensity

	(kgoe/1000 euro)			*Index (1992=100)*		
	1992	**1997**	**2002**	**1992**	**1997**	**2002**
EU-25	**239**	**227**	**210**	**100**	**95**	**88**
EU-15	**212**	**205**	**191**	**100**	**96**	**90**
Belgium	249	249	214	100	100	86
Czech Republic	1 175	962	866	100	82	74
Denmark	149	146	123	100	99	83
Germany	186	180	166	100	96	89
Estonia	2 448	1 660	1 156	100	68	47
Greece	263	268	258	100	102	98
Spain	222	223	229	100	100	103
France	203	199	190	100	98	94
Ireland	237	202	166	100	85	70
Italy	195	189	184	100	97	94
Cyprus	302	283	270	100	94	89
Latvia	1 321	792	749	100	60	57
Lithuania	1 707	1 521	1 273	100	89	75
Luxembourg	301	217	197	100	72	65
Hungary	748	700	574	100	94	77
Malta	292	343	265	100	117	91
Netherlands	236	221	201	100	94	85
Austria	147	148	143	100	100	97
Poland	1 609	877	650	100	55	40
Portugal	229	233	255	100	102	111
Slovenia	387	388	342	100	100	88
Slovakia	1 427	1 025	962	100	72	67
Finland	299	299	272	100	100	91
Sweden	259	255	224	100	98	86
United Kingdom	273	242	215	100	89	79
Iceland	408	438	498	100	107	122
Norway	224	195	187	100	87	84
Bulgaria	2 134	2 392	1 781	100	112	83
Romania	1 915	1 648	1 267	100	86	66
Turkey	462	476	479	100	103	104

Data Source: Eurostat



(kgoe/1000 euro)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	239	240	231	230	235	227	224	217	211	213	210
EU-15	212	213	207	207	211	205	203	198	193	194	191

Index (1992=100)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	100	100	97	96	98	95	94	91	88	89	88
EU-15	100	100	98	97	99	96	96	93	91	92	90

Data Source: Eurostat

Over the last decade energy intensity decreased by 12% in the EU-25, a decrease which has been particularly pronounced since 1996. Only Spain and Portugal showed an increase.

A comparison of the EU-15 countries and the new Member States shows that convergence is far, even though the new Member States show a much higher decrease rate in energy intensity over the last decade. In 1992 the figures for energy intensity for the EU-15 countries and the new Member States were 212 and 1 200 kgoe/1000 Euro respectively while in 2002 the relevant figures were 191 and 680 kgoe/1000 Euro.

Primary Energy Production

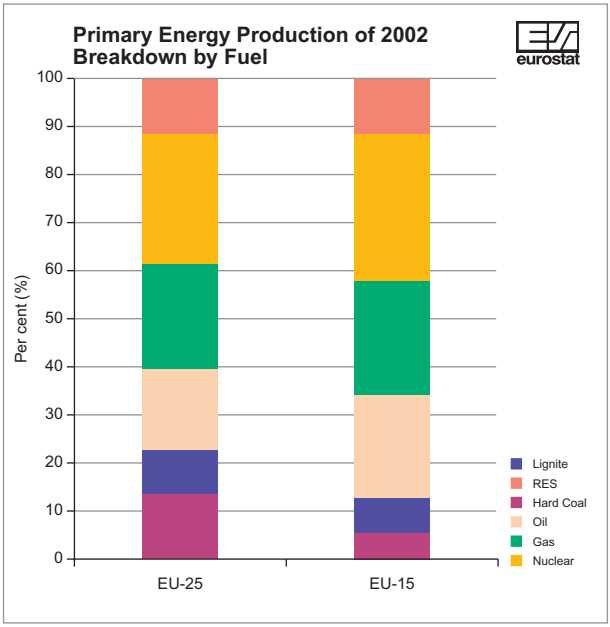
			(ktoe)	Year 2002, share of each fuel to total (%)					
	1992	1997	2002	Hard Coal	Lignite	Oil	Gas	Nuclear	RES
EU-25	**857 913**	**912 823**	**892 108**	**14**	**8**	**17**	**22**	**28**	**11**
EU-15	**700 100**	**754 254**	**751 775**	**6**	**7**	**20**	**25**	**31**	**11**
BE	11 531	12 552	12 900	-	-	-	-	95	5
CZ	35 538	32 331	30 048	81	0	1	0	15	3
DK	12 912	20 173	28 452	-	-	65	27	-	8
DE	159 669	138 377	131 613	15	30	3	12	32	8
EE	4 515	3 632	3 620	-	77	8	-	-	15
EL	8 972	9 924	10 541	-	85	2	0	-	13
ES	32 293	30 651	31 771	18	5	1	2	51	23
FR	114 777	123 910	132 866	1	0	1	1	85	12
IE	3 082	2 843	1 499	0	36	-	45	-	19
IT	27 208	30 249	26 206	0	-	21	46	-	33
CY	5	42	45	-	-	-	-	-	100
LV	298	332	1 831	-	2	-	-	-	98
LT	3 891	3 362	4 847	-	0	10	-	75	15
LU	48	47	56	-	-	-	-	-	100
HU	12 834	12 281	11 047	-	24	14	21	33	8
MT	:	:	:	:	:	:	:	:	:
NL	67 054	65 520	60 131	-	-	5	90	2	3
AT	8 328	8 502	10 295	-	3	9	16	-	72
PL	93 328	99 081	79 053	74	15	1	5	-	5
PT	2 302	3 045	3 643	-	-	-	-	-	100
SI	3 038	2 962	3 364	-	35	0	0	42	23
SK	4 365	4 546	6 478	-	14	1	2	72	11
FI	12 005	14 805	15 666	-	13	-	-	37	50
SE	29 252	32 170	31 849	-	1	-	-	55	44
UK	210 666	261 484	254 287	7	-	46	37	9	1
IS	1 369	1 682	2 462	-	-	-	-	-	100
NO	146 355	212 181	232 868	1	-	69	25	-	5
BG	8 794	9 798	10 528	0	42	0	0	50	8
RO	33 958	30 367	26 738	0	19	23	39	5	14
TR	26 552	27 999	24 244	5	44	10	1	-	40

(Mtoe)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	858	865	875	892	922	913	893	900	892	893	892
EU-15	700	706	720	734	760	754	748	762	756	754	752

Data Source: Eurostat

eurostat



(Mtoe)

	EU-25	**EU-15**
Total	892	752
Nuclear	248	231
Gas	194	187
Oil	155	152
Hard Coal	126	43
RES	95	85
Lignite	74	54

Data Source: Eurostat

Primary energy commodities may be divided between fuels of fossil origin, nuclear energy and renewable energy commodities. Fossil fuels are taken from natural resources, which were formed from biomass in the geological past. The definition of renewable energy sources (RES) includes energy generated from solar, wind, biomass, geothermal, hydropower and ocean resources.

EU-25 primary energy production recorded a slight increase of 4.0% over the last decade. This was due to an increase in the primary production of all except solid fuels, the primary production of which has shown a substantial fall (-35%) over recent years (-47% for Coal, -17% for Lignite). In 2002 nuclear heat (used for the production of electricity) was the most important primary energy resource (accounting for 28% of EU-25 primary production), followed by natural gas and solid fuels which accounted for 22% each. The contribution of renewables, which increased by 32%, still remains low (11%) compared with the other energy sources.

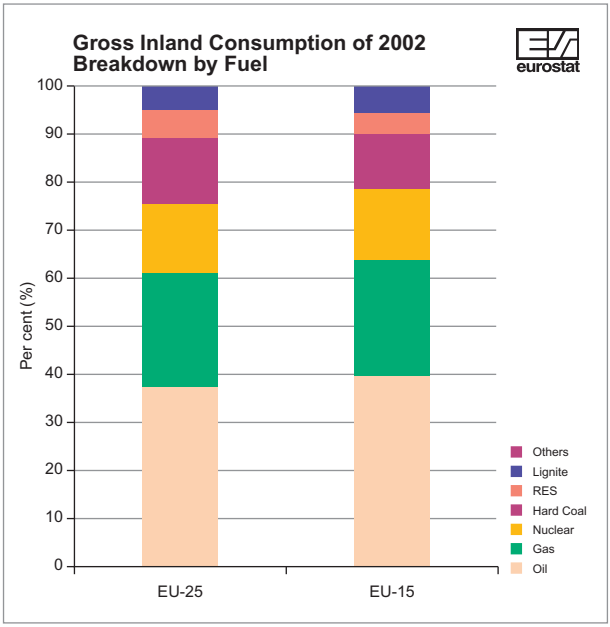
Gross Inland Consumption

			(ktoe)	Year 2002, share of each fuel to total %						
	1992	1997	2002	Hard Coal	Lignite	Oil	Gases	Nuclear	RES	Others
EU-25	**1 550 162**	**1 620 034**	**1 684 042**	**14**	**4**	**38**	**23**	**15**	**6**	**0**
EU-15	**1 336 740**	**1 405 913**	**1 482 082**	**11**	**4**	**40**	**23**	**16**	**6**	**0**
BE	50 259	55 120	52 570	12	0	36	25	23	2	2
CZ	43 164	42 071	40 991	50	0	20	19	11	2	-2
DK	18 899	21 309	19 821	21	-	44	24	-	12	-1
DE	340 438	345 465	343 671	13	12	37	22	12	3	1
EE	6 841	5 513	4 963	0	57	21	12	-	11	-1
EL	23 040	25 585	29 736	2	29	57	6	-	5	1
ES	95 158	106 054	130 063	15	1	51	14	13	6	0
FR	234 037	243 209	265 537	5	0	35	14	42	6	-2
IE	10 089	12 279	15 139	12	5	57	24	-	2	0
IT	157 244	163 568	173 550	8	0	51	33	-	5	3
CY	1 808	2 065	2 420	1	0	97	-	-	2	-
LV	5 510	3 332	4 189	2	1	27	31	-	34	5
LT	10 683	8 327	8 671	2	0	29	25	42	8	-6
LU	3 790	3 351	3 980	2	0	62	27	-	1	8
HU	24 569	25 313	25 633	4	10	25	42	14	4	1
MT	618	927	823	-	-	100	-	-	-	-
NL	70 067	75 127	78 195	11	0	38	46	1	2	2
AT	25 745	28 379	30 909	11	1	42	21	-	24	1
PL	97 401	103 228	88 837	48	14	22	11	-	5	0
PT	18 344	20 744	25 966	13	-	61	11	-	14	1
SI	5 263	6 461	6 864	4	18	36	11	21	11	-1
SK	17 564	16 883	18 570	17	6	18	32	25	4	-2
FI	27 909	32 760	35 136	13	6	29	10	16	22	4
SE	46 332	50 271	51 435	5	1	31	1	34	27	1
UK	215 390	222 693	226 374	16	-	35	38	10	1	0
IS	2 076	2 517	3 382	3	-	24	-	-	73	-
NO	22 420	24 439	26 278	3	-	29	23	-	48	-3
BG	20 724	20 549	18 720	13	23	23	12	28	4	-3
RO	45 912	43 614	35 753	7	15	27	37	4	10	0
TR	54 670	71 034	75 135	12	14	41	20	-	13	0

(Mtoe)

	1992	1993	1994	1996	1997	1998	1999	2000	2001	2002
EU-25	1 550	1 546	1 539	1 631	1 620	1 643	1 637	1 652	1 691	1 684
EU-15	1 337	1 335	1 335	1 413	1 406	1 436	1 438	1 455	1 488	1 482

Data Source: Eurostat



(Mtoe)

	EU-25	**EU-15**
Total	1 684	1 482
Oil	640	592
Gas	389	350
Nuclear	248	231
Hard Coal	232	164
RES	96	85
Lignite	74	54
Others	5	6

Data Source: Eurostat

Note: Negative percentage in the column "Others" indicates negative electricity net imports.

Over the period 1992-2002 gross inland consumption grew by 8.6%.

Oil is the most important fuel (38% of total gross inland consumption in 2002) and its contribution remained stable over the period. The share of natural gas in the total of fuels rose from 17% in 1992 to 23% in 2002, while that of solid fuels dwindled from 25% in 1992 to 18% in 2002. Nuclear power and renewable energy together contributed 21% in 2002.

EU-15 Imports of Energy Products, by Country of Origin

EU-15 Imports of Hard Coal, by Country of Origin

(1000 tonnes)

	1992	2002
South Africa	28 138	50 433
Australia	21 816	27 739
Colombia	11 994	18 353
Poland	12 155	18 309
USA	48 062	13 825
Other Countries	24 965	50 870
Total	147 130	179 529

EU-15 Imports of Crude Oil, by Country of Origin

(1000 tonnes)

	1992	2002
former USSR	44 781	125 175
Norway	72 746	102 827
Saudi Arabia	87 875	53 144
Libya	52 133	38 838
Iran	50 979	25 928
Other countries	150 036	134 676
Total	458 550	480 588

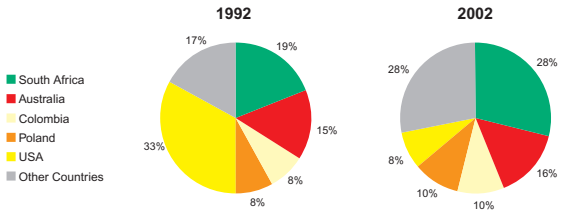
EU-15 Imports of Natural Gas, by Country of Origin

(TJ)

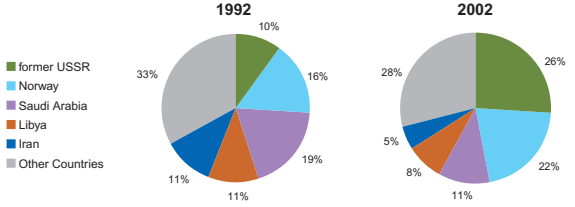
	1992	2002
former USSR	2 113 347	2 577 358
Norway	1 029 097	2 396 161
Algeria	1 287 045	2 022 332
Nigeria	0	247 181
Libya	64 158	25 536
Other countries	26 508	1 550 634
Total	4 520 155	8 819 202

Data Source: Eurostat

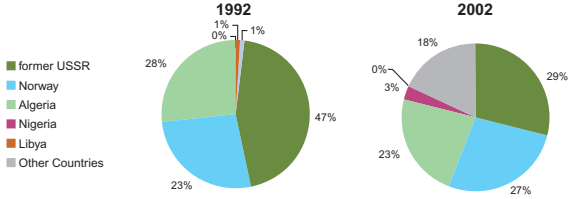
EU-15 Imports of Hard Coal, by Country of Origin



EU-15 Imports of Crude Oil, by Country of Origin



EU-15 Imports of Natural Gas, by Country of Origin



South Africa, with a share of 28% of the total hard coal supply to the EU-15 in 2002, was the main supplier while Poland, USA, Colombia and Australia had shares ranging from 10% to 16%. Total hard coal imports to the EU-15 grew by 22% over the period 1992-2002.

The origin of EU-15 crude oil changed over the last decade. Norway and countries of the former USSR covered 47% of oil imports in 2002 (doubling from 1992) and the percentage of imports from Libya, Iran and Saudi Arabia dropped from 41% in 1992 to 24% in 2002. Crude oil imports to the EU-15 grew by 5% over the last decade.

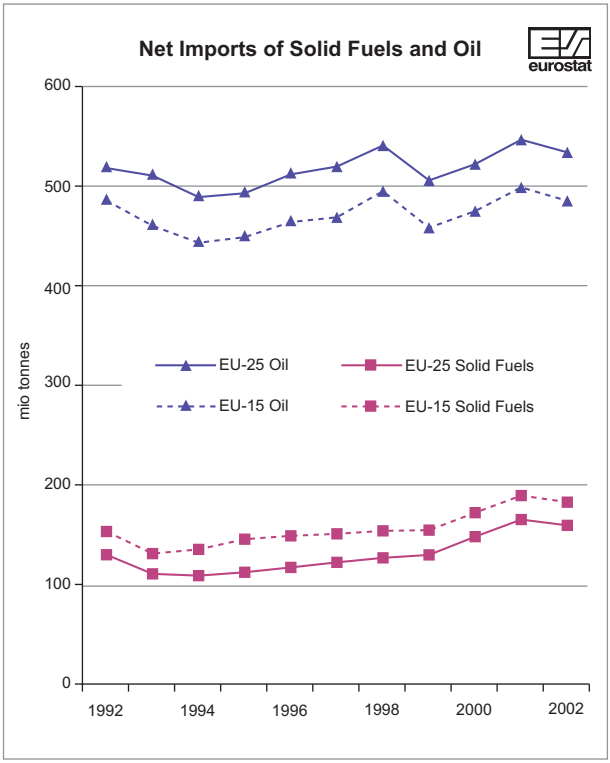
EU-15 imports of natural gas rose by 95% over the period 1992-2002. Imports from most supplying countries increased significantly. However, in 2002 the relative share of the former USSR dropped to 29% while the shares of Norway and Algeria were 27% and 23% respectively.

Net Imports of Solid Fuels and Oil

(1000 tonnes)

	Solid Fuels		Oil	
	1992	**2002**	**1992**	**2002**
EU-25	**133 119**	**160 231**	**525 976**	**529 521**
EU-15	**152 147**	**183 047**	**483 140**	**483 897**
Belgium	13 482	8 240	25 370	29 088
Czech Republic	-13 454	-7 023	7 779	7 908
Denmark	11 951	6 134	1 033	-8 868
Germany	16 802	40 340	131 522	121 329
Estonia	2 252	538	1 405	875
Greece	2 140	986	16 339	20 695
Spain	14 564	24 090	52 497	74 413
France	21 801	19 103	86 495	92 959
Ireland	3 052	2 798	4 737	8 810
Italy	17 908	19 763	91 246	86 765
Cyprus	26	78	1 893	2 598
Latvia	653	112	2 663	1 323
Lithuania	920	237	3 990	1 971
Luxembourg	1 481	135	1 922	2 443
Hungary	2 402	1 382	5 512	4 591
Malta	-	-	762	1 361
Netherlands	11 994	13 042	33 664	40 119
Austria	4 744	5 171	10 222	12 307
Poland	-23 003	-24 117	13 776	19 323
Portugal	4 463	5 686	13 575	16 204
Slovenia	141	628	1 566	2 401
Slovakia	11 035	5 349	3 490	3 273
Finland	4 804	6 232	9 534	10 084
Sweden	3 267	3 306	14 608	15 900
United Kingdom	19 694	28 021	-9 624	-38 351
Iceland	68	146	738	891
Norway	920	-1 025	-97 881	-147 971
Bulgaria	3 644	3 969	5 290	4 469
Romania	6 065	4 235	5 972	3 630
Turkey	5 521	12 657	19 558	28 182

Data Source: Eurostat



(mio tonnes)

Oil

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	526	510	489	491	511	516	538	505	520	541	530
EU-15	483	466	446	446	465	469	490	459	474	496	484

Solid Fuels

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	133	110	107	113	121	125	129	130	148	164	160
EU-15	152	133	135	146	148	153	156	154	172	188	183

Data Source: Eurostat

During the period 1992-2002 the net imports of solid fuels to the EU-25 increased by 20% (27.1 million tonnes), mainly attributed to the increased imports of Germany, United Kingdom and Spain. On the other hand, Slovakia, Belgium, Denmark and France imported considerably less hard coal in 2002 than in 1992.

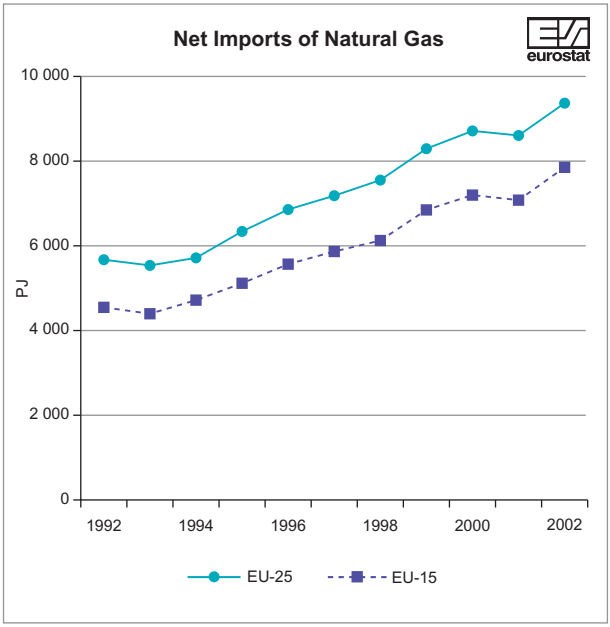
The increase in net imports of oil products was 0.7% (3.5 million tonnes) over the 1992-2002 period. Most countries imported more oil products in 2002 than in 1992 but increased exports by the United Kingdom and Denmark almost counterbalanced the net imports of oil products at EU-25 level.

Net Imports of Natural Gas

(TJ)

	1992	1997	2002
EU-25	**5 670 848**	**7 164 100**	**9 356 091**
EU-15	**4 468 369**	**5 775 762**	**7 779 947**
Belgium	425 078	524 752	635 134
Czech Republic	254 313	354 072	368 316
Denmark	-63 846	-129 852	-138 837
Germany	2 073 353	2 705 672	2 794 500
Estonia	30 013	26 134	27 714
Greece	-	6 017	81 622
Spain	225 149	536 854	880 596
France	1 238 080	1 365 361	1 709 193
Ireland	-	40 261	139 612
Italy	1 315 765	1 487 538	2 257 007
Cyprus	-	-	-
Latvia	99 298	49 249	53 210
Lithuania	128 699	93 134	102 123
Luxembourg	21 669	29 131	48 986
Hungary	191 344	304 682	404 952
Malta	-	-	-
Netherlands	-1 331 717	-1 174 476	-858 271
Austria	202 218	238 603	219 757
Poland	247 964	306 236	310 785
Portugal	-	4 616	126 847
Slovenia	27 960	36 497	35 922
Slovakia	222 888	218 334	273 122
Finland	115 204	135 221	171 371
Sweden	29 129	33 439	37 295
United Kingdom	218 287	-27 375	-324 865
Iceland	-	-	-
Norway	-1 047 700	-1 725 755	-2 466 707
Bulgaria	188 931	179 192	104 600
Romania	166 688	168 753	145 601
Turkey	169 937	380 260	667 112

Data Source: Eurostat



(PJ)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	5 671	5 467	5 623	6 299	6 908	7 164	7 524	8 249	8 674	8 631	9 356
EU-15	4 468	4 437	4 560	5 081	5 510	5 776	6 116	6 852	7 223	7 089	7 780

Data Source: Eurostat

Total net imports at EU-25 level rose by 65% over the last decade; most EU-25 countries import natural gas with the exception of the North Sea producers: Denmark, Netherlands and the United Kingdom. Norway is the largest gas exporter of all the countries under consideration, while Germany, France and Italy are the largest importers with a 72% share of EU-25 total net imports in 2002.

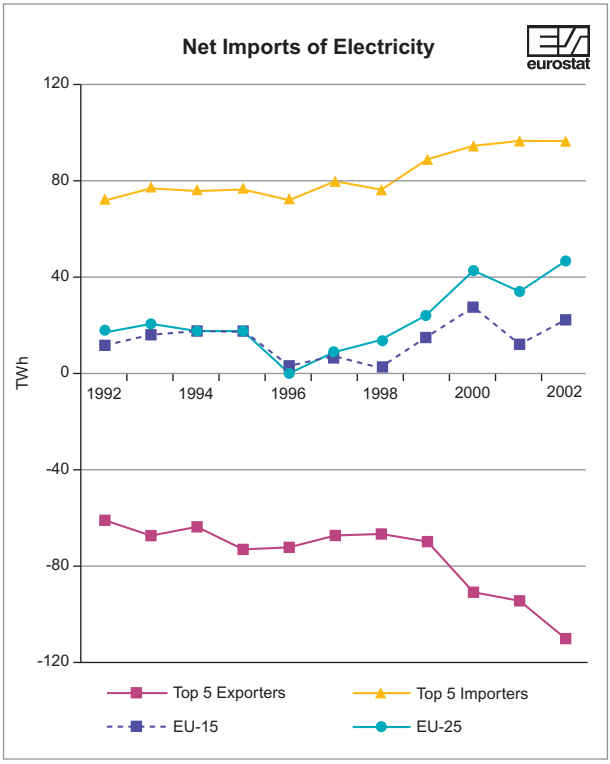
Ireland, Greece and Portugal are rather new to the gas market, introduced in 1993, 1996 and 1997 respectively, while Cyprus and Malta do not use natural gas at all.

Net Imports of Electricity

(GWh)

	1992	1997	2002
EU-25	**12 384**	**6 268**	**21 735**
EU-15	**18 793**	**7 782**	**46 053**
Belgium	128	3 270	7 588
Czech Republic	-3 036	-1 188	-11 387
Denmark	3 746	-7 252	-2 071
Germany	-5 320	-2 349	9 998
Estonia	-3 238	-974	-690
Greece	605	2 294	2 896
Spain	641	-3 073	5 329
France	-53 796	-65 396	-76 900
Ireland	0	-12	503
Italy	35 300	38 832	50 597
Cyprus	-	-	-
Latvia	4 078	1 823	2 348
Lithuania	-5 303	-3 525	-6 486
Luxembourg	3 978	5 186	3 438
Hungary	3 467	2 149	4 256
Malta	-	-	-
Netherlands	8 678	12 632	16 382
Austria	555	-768	699
Poland	-4 032	-2 185	-7 068
Portugal	1 341	2 899	1 899
Slovenia	-1 813	-1 696	-1 134
Slovak Republic	3 468	4 082	-4 157
Finland	8 394	7 653	11 925
Sweden	-2 150	-2 708	5 356
United Kingdom	16 693	16 574	8 414
Iceland	-	-	-
Norway	-8 730	3 818	-9 712
Bulgaria	2 705	-3 550	-6 295
Romania	4 203	221	-2 854
Turkey	-125	2 221	3 153

Data Source: Eurostat



(TWh)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	12.4	17.8	17.2	16.0	-3.4	6.3	2.3	14.0	24.9	12.1	21.7
EU-15	18.8	21.9	18.0	17.4	-1.6	7.8	13.1	23.7	42.4	33.4	46.1
Top 5 Exporters	-62.7	-67.6	-64.8	-73.5	-73.5	-68.2	-67.3	-73.9	-89.9	-92.3	-106.0
Top 5 Importers	69.2	76.3	75.6	76.2	72.5	79.0	75.7	86.7	93.6	95.1	94.9

Data Source: Eurostat

Note: Top 5 Exporters and Importers are drawn according to average activity levels of the last three years.
Top 5 Exporting countries are France, Czech Republic,Poland, Lithuania and Slovakia.
Top 5 Importing countries are Italy, Netherlands, Finland, United Kingdom and Belgium.

The net electricity imports of the European Union show variations during the period under consideration and considerable differences between Member States. This volatility must be seen in the context of trade in electricity rather than availability of local resources as is the case of solid fuels, natural gas and oil.

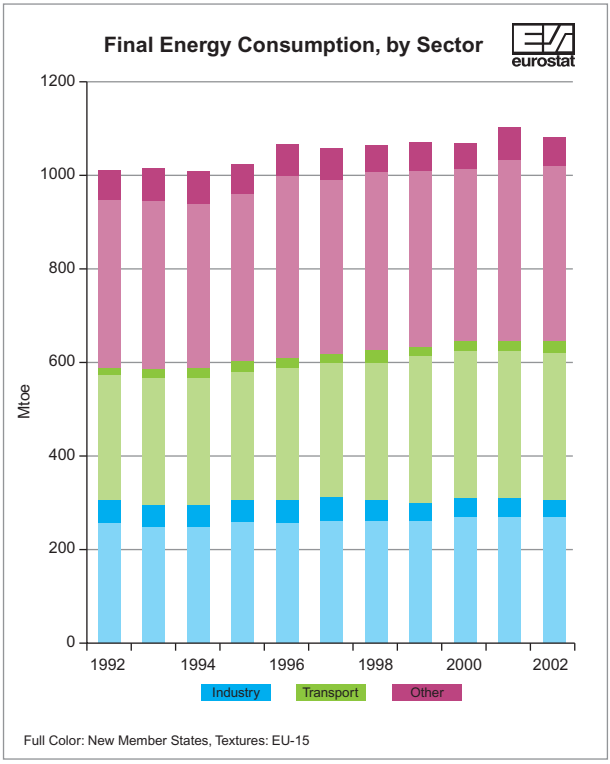
The largest net exporter of electricity in the EU-25 is by far France followed by Czech Republic; on the other hand the largest net importer is Italy, followed by the Netherlands while the total exports of the 5 most exporting countries almost balanced the total imports of the 5 most importing countries throughout the period 1992-2002.

Final Enery Consumption, by Sector

(ktoe)

	Total		Industry		Transport		Other	
	1992	2002	1992	2002	1992	2002	1992	2002
EU-25	**1 010 275**	**1 082 742**	**306 145**	**306 114**	**283 779**	**338 873**	**420 351**	**437 755**
EU-15	**873 481**	**959 926**	**250 929**	**268 403**	**264 424**	**314 220**	**358 127**	**377 303**
BE	33 769	35 816	12 287	12 678	8 283	9 604	13 199	13 535
CZ	30 374	23 829	17 214	9 659	2 993	5 169	10 167	9 001
DK	13 991	14 708	2 819	2 917	4 144	4 719	7 029	7 072
DE	218 413	210 485	61 221	55 630	61 263	64 138	95 929	90 717
EE	3 587	2 586	1 353	524	399	679	1 836	1 383
EL	14 956	19 497	3 828	4 458	6 149	7 460	4 979	7 579
ES	59 952	85 379	19 444	28 074	24 864	34 882	15 644	22 422
FR	143 222	152 686	36 816	36 511	42 578	51 407	63 828	64 768
IE	7 152	11 038	1 652	2 223	2 139	4 384	3 362	4 430
IT	110 222	125 163	35 181	39 529	35 838	42 382	39 203	43 252
CY	1 282	1 647	365	369	685	897	232	382
LV	4 284	3 620	1 310	657	1 025	870	1 950	2 093
LT	6 053	3 902	1 791	749	1 412	1 175	2 850	1 978
LU	3 552	3 732	1 603	885	1 277	2 126	673	720
HU	15 383	16 915	4 397	3 749	2 602	3 482	8 384	9 684
MT	399	445	22	69	255	266	122	110
NL	44 853	50 641	12 574	13 686	11 204	14 578	21 075	22 377
AT	19 571	24 990	5 532	7 342	5 038	7 283	9 001	10 364
PL	59 141	54 418	20 888	16 594	7 718	8 982	30 535	28 842
PT	12 040	18 342	4 136	5 812	4 315	7 126	3 589	5 404
SI	3 288	4 589	1 152	1 296	885	1 390	1 251	1 903
SK	13 004	10 864	6 725	4 047	1 382	1 743	4 897	5 075
FI	21 238	25 489	9 064	12 065	4 089	4 548	8 086	8 875
SE	30 704	33 668	11 358	12 683	7 458	7 968	11 889	13 017
UK	139 844	148 294	33 415	33 909	45 786	51 614	60 643	62 771
IS	1 607	2 152	353	736	279	316	975	1 100
NO	15 717	18 125	5 482	6 302	4 018	4 606	6 217	7 217
BG	10 903	8 621	5 597	3 413	1 902	2 020	3 404	3 187
RO	24 914	23 247	10 841	10 595	4 810	4 269	9 263	8 382
TR	32 688	52 958	12 648	19 456	9 210	12 550	10 830	20 952

Data Source: Eurostat



(Mtoe)

EU-25	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Industry	306	296	297	306	307	309	304	301	312	311	306
Transport	284	289	291	295	305	311	323	331	333	336	339
Other	420	428	416	424	456	437	441	438	426	450	438

EU-15	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Industry	251	247	250	259	258	262	261	262	271	272	268
Transport	264	270	271	275	283	288	300	307	310	312	314
Other	358	363	354	362	393	377	381	378	369	389	377

Data Source: Eurostat

EU-25 final energy consumption increased by 7% over the period 1992-2002. 76% of this increase was due to the transport sector which grew by 19% over the last decade. Final energy consumption in industry reverted to 1992 levels while energy consumption of the other sectors increased by 4% in the same period.

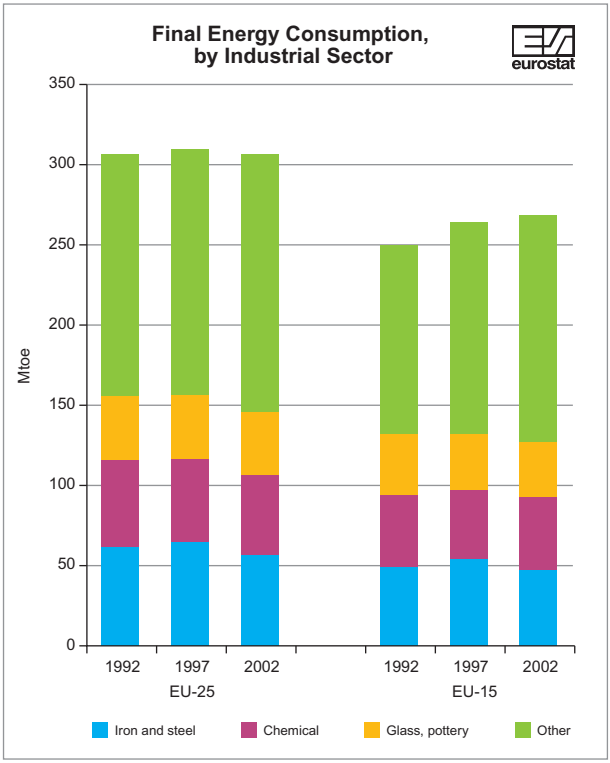
In 2002, transport accounted for 31% of EU-25 final energy consumption, industry for 28% and the other sectors of households, commerce and public services remained the largest final energy consumers accounting altogether for 41% of total energy consumption.

Final Energy Consumption, by Industrial Sector

(ktoe)

	Total industry		Iron and steel		Chemical		Glass, pottery	
	1992	2002	1992	2002	1992	2002	1992	2002
EU-25	**306 145**	**306 114**	**62 882**	**56 542**	**53 305**	**51 322**	**40 147**	**39 030**
EU-15	**250 929**	**268 403**	**50 404**	**47 440**	**46 876**	**44 461**	**34 741**	**33 985**
BE	12 287	12 678	4 334	3 849	2 746	2 974	1 314	1 075
CZ	17 214	9 659	4 513	3 156	1 171	1 302	766	1 057
DK	2 819	2 917	101	91	291	263	567	593
DE	61 221	55 630	14 636	13 600	14 797	9 975	7 434	6 451
EE	1 353	524	3	1	266	38	203	88
EL	3 828	4 458	183	242	204	256	1 301	1 222
ES	19 444	28 074	3 524	4 448	3 080	4 018	4 580	6 170
FR	36 816	36 511	6 512	5 091	5 589	6 932	4 679	4 102
IE	1 652	2 223	71	8	201	340	239	360
IT	35 181	39 529	7 088	7 105	6 628	5 652	7 421	7 793
CY	365	369	-	-	3	2	156	153
LV	1 310	657	90	127	40	18	70	68
LT	1 791	749	6	4	169	58	395	159
LU	1 603	885	1 138	385	83	30	125	61
HU	4 397	3 749	1 093	643	881	802	616	624
MT	22	69	-	-	-	-	-	-
NL	12 574	13 686	2 078	2 230	5 173	4 375	989	715
AT	5 532	7 342	902	1 491	535	915	615	585
PL	20 888	16 594	5 345	3 523	3 730	3 786	3 123	2 244
PT	4 136	5 812	251	131	458	583	1 349	1 894
SI	1 152	1 296	154	142	70	117	66	192
SK	6 725	4 047	1 274	1 506	:	738	:	460
FI	9 064	12 065	1 328	1 536	860	658	721	337
SE	11 358	12 683	1 551	1 989	944	600	503	488
UK	33 415	33 909	6 706	5 245	5 286	6 890	2 904	2 138
IS	353	736	81	179	16	2	11	11
NO	5 482	6 302	1 184	996	645	938	241	318
BG	5 597	3 413	868	929	1 948	899	703	532
RO	10 841	10 595	3 291	2 835	2 402	2 806	1 306	1 345
TR	12 648	19 456	2 915	2 942	1 104	1 380	746	910

Data Source: Eurostat



(Mtoe)

	EU-25			EU-15		
	1992	**1997**	**2002**	**1992**	**1997**	**2002**
Total	306	309	306	251	262	268
Iron and steel	63	67	57	50	55	47
Chemical	53	51	51	47	44	44
Glass, pottery	40	39	39	35	33	34
Other	150	152	159	119	130	143

Data Source: Eurostat

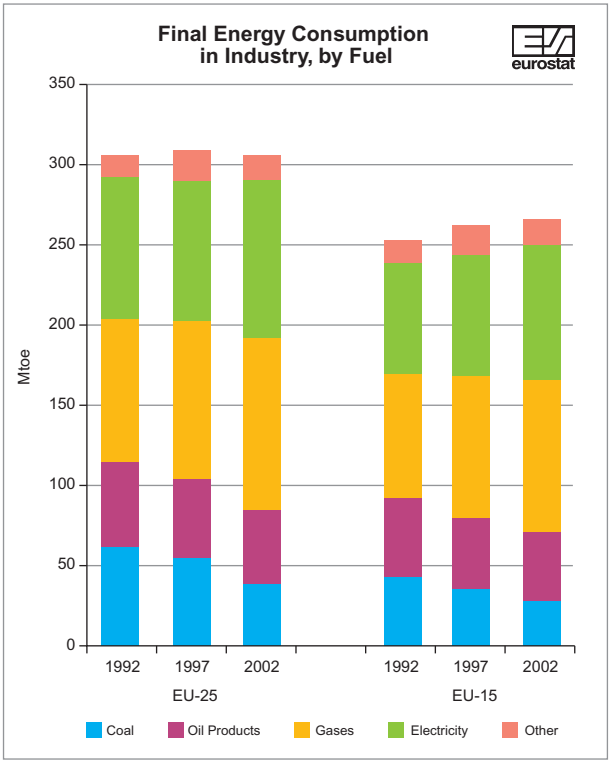
After several fluctuations during the last decade, the total energy consumption of all EU-25 industrial sectors exhibits no change between 1992 and 2002. The drop observed in the three main industrial sectors, namely iron and steel industry, glass, pottery and building material industry and chemical industry is counterbalanced by the increase of the other industrial sectors which formed 49% of the total industrial consumption in 1992 and grew to 52% in 2002.

Final Energy Consumption in Industry, by Fuel

(ktoe)

	All products		Coal		Oil products		Gases		Electricity	
	1992	2002	1992	2002	1992	2002	1992	2002	1992	2002
EU-25	**306 145**	**306 114**	**61 255**	**38 651**	**53 461**	**47 087**	**89 798**	**105 424**	**75 613**	**91 239**
EU-15	**250 929**	**268 403**	**44 556**	**27 914**	**47 728**	**43 228**	**77 325**	**94 557**	**67 866**	**83 408**
BE	12 287	12 678	3 234	2 224	2 604	1 280	3 371	5 207	2 770	3 348
CZ	17 214	9 659	7 370	2 953	1 988	578	3 434	3 342	1 692	1 768
DK	2 819	2 917	330	199	953	781	591	759	791	853
DE	61 221	55 630	13 027	8 597	9 181	5 293	20 626	21 180	16 280	20 084
EE	1 353	524	112	54	352	83	73	91	192	162
EL	3 828	4 458	996	721	1 620	1 966	6	309	1 010	1 215
ES	19 444	28 074	3 001	1 734	5 252	6 335	4 357	10 699	5 578	7 987
FR	36 816	36 511	6 894	3 029	7 059	6 231	10 913	14 300	10 409	11 466
IE	1 652	2 223	140	39	709	942	348	432	420	697
IT	35 181	39 529	4 335	3 845	7 046	6 494	13 997	16 614	9 565	12 305
CY	365	369	17	36	317	291	-	-	31	41
LV	1 310	657	17	12	183	90	327	282	225	131
LT	1 791	749	78	55	465	101	531	244	314	219
LU	1 603	885	672	89	264	53	445	405	223	318
HU	4 397	3 749	557	427	564	324	2 343	1 653	779	882
MT	22	69	-	-	-	-	-	-	22	69
NL	12 574	13 686	1 377	1 333	1 250	1 635	7 001	5 810	2 895	3 531
AT	5 532	7 342	385	336	1 126	1 509	1 839	2 729	1 572	1 831
PL	20 888	16 594	6 149	6 005	807	1 761	2 955	3 110	3 125	3 283
PT	4 136	5 812	613	177	1 853	1 801	39	917	1 101	1 416
SI	1 152	1 296	83	97	173	165	397	463	401	501
SK	6 725	4 047	2 315	1 098	884	465	2 413	1 683	966	775
FI	9 064	12 065	1 364	1 077	999	1 294	1 606	1 285	2 723	3 755
SE	11 358	12 683	1 059	1 336	1 735	1 506	429	511	4 339	4 925
UK	33 415	33 909	7 129	3 175	6 076	6 106	11 756	13 401	8 192	9 677
IS	353	736	46	98	92	137	-	-	215	501
NO	5 482	6 302	723	710	490	772	9	138	3 853	4 027
BG	5 597	3 413	373	699	602	795	1 509	844	1 028	729
RO	10 841	10 595	1 393	1 076	1 257	1 889	3 841	4 821	2 178	1 952
TR	12 648	19 456	4 732	8 193	3 978	4 987	1 403	2 073	2 518	4 203

Data Source: Eurostat



(Mtoe)

	EU-25			EU-15		
	1992	**1997**	**2002**	**1992**	**1997**	**2002**
Total	306	309	306	251	262	268
Coal	61	54	39	45	37	28
Oil Products	53	50	47	48	46	43
Gases	90	99	105	77	87	95
Electricity	76	83	91	68	74	83
Other	26	24	24	13	18	19

Data Source: Eurostat

A clear trend observed in EU-25 industry is the significant reduction in coal use, a decrease of 37% over the last decade observed in almost all Member States. Consumption of oil also decreased by 12% over the same period and it is evident that the European industry is turning towards natural gas, a cleaner and more efficient fuel (17% increase over the last decade).

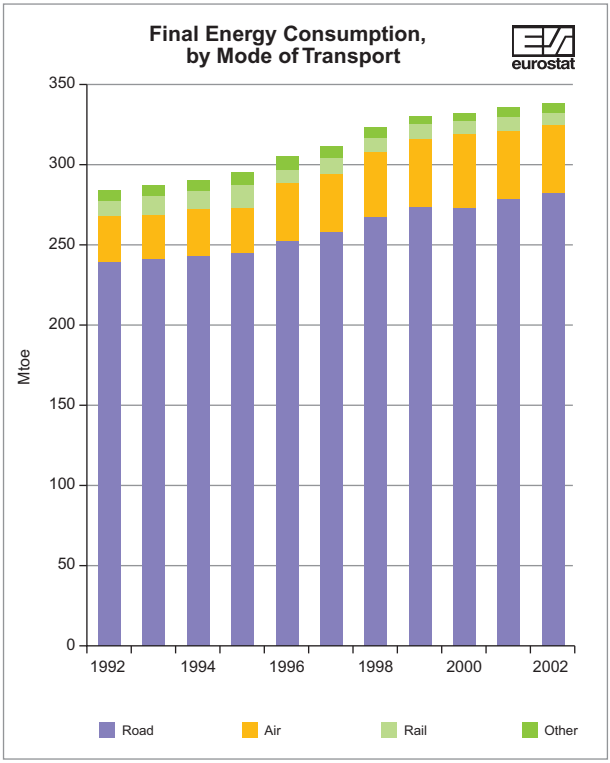
Likewise, there was a significant increase (21%) in electricity consumption of EU-25 industry between 1992 and 2002 which amounted to 30% of the total final energy consumption in industry in 2002. The share of oil was 15%, natural gas 34% while the share of coal was 13%, dropping from 20% ten years earlier.

Final Energy Consumption, by Mode of Transport

(ktoe)

	Total transport		Road		Air		Rail	
	1992	2002	1992	2002	1992	2002	1992	2002
EU-25	**283 779**	**338 873**	**238 230**	**281 883**	**29 851**	**43 401**	**8 616**	**8 639**
EU-15	**264 424**	**314 220**	**221 587**	**259 877**	**28 784**	**42 052**	**7 146**	**7 365**
BE	8 283	9 604	6 748	7 986	915	1 251	193	156
CZ	2 993	5 169	2 583	4 695	178	203	232	268
DK	4 144	4 719	3 242	3 749	618	742	119	99
DE	61 263	64 138	53 138	54 980	5 317	6 992	2 101	1 933
EE	399	679	320	588	12	20	62	60
EL	6 149	7 460	4 280	5 642	1 214	1 154	60	60
ES	24 864	34 882	19 719	28 253	2 763	4 308	586	923
FR	42 578	51 407	36 414	42 840	4 281	6 534	1 241	1 281
IE	2 139	4 384	1 744	3 542	309	783	57	41
IT	35 838	42 382	32 515	38 096	2 160	3 196	766	856
CY	685	897	429	584	254	310	2	2
LV	1 025	870	798	762	91	28	15	80
LT	1 412	1 175	1 215	1 069	67	31	129	71
LU	1 277	2 126	1 132	1 740	132	375	12	11
HU	2 602	3 482	2 254	3 114	137	208	211	158
MT	255	266	174	173	150	93	-	-
NL	11 204	14 578	8 405	10 705	1 977	3 399	155	175
AT	5 038	7 283	4 355	6 428	376	534	301	313
PL	7 718	8 982	6 724	8 026	236	427	709	525
PT	4 315	7 126	3 568	6 225	619	744	87	71
SI	885	1 390	846	1 314	11	29	28	47
SK	1 382	1 743	1 300	1 681	:	:	82	62
FI	4 089	4 548	3 525	3 806	402	496	96	94
SE	7 458	7 968	6 287	6 823	825	725	249	274
UK	45 786	51 614	36 515	39 063	6 875	10 821	1 122	1 079
IS	279	316	185	203	75	108	-	-
NO	4 018	4 606	2 749	3 112	514	639	164	156
BG	1 902	2 020	1 385	1 799	316	151	188	70
RO	4 810	4 269	3 649	3 776	249	98	567	360
TR	9 210	12 550	8 182	10 436	549	1 632	233	232

Data Source: Eurostat



(Mtoe)

EU-25	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	284	289	291	295	305	311	323	331	333	336	339
Road	238	242	243	245	253	258	267	273	273	278	282
Air	30	31	32	34	35	37	41	43	45	44	43
Rail	9	9	9	9	9	9	9	9	9	9	9
Other	7	7	7	7	7	7	7	6	5	5	5

Data Source: Eurostat

During the period 1992-2002, EU-25 energy consumption in transport increased by 19.4%. Increases can be observed in all modes of transport: 45% in air transport, 18% in road transport and a marginal 0.3% in rail transport.

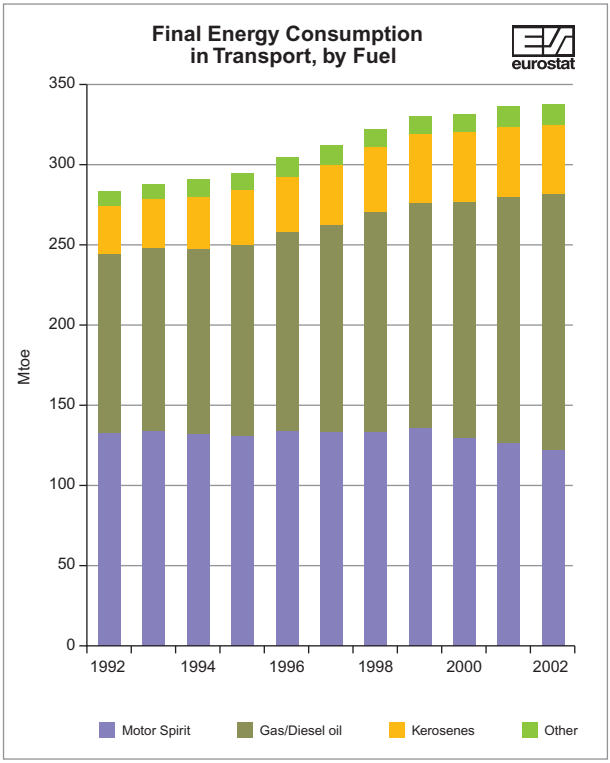
The large increase in energy use in air transport indicates a corresponding increase in air travel in the EU-15 over the period 1992-2002.

Final Energy Consumption in Transport, by Fuel

(ktoe)

	Total		Motor Spirit		Kerosenes		Gas/Diesel oil	
	1992	2002	1992	2002	1992	2002	1992	2002
EU-25	**283 779**	**338 873**	**134 467**	**125 206**	**29 758**	**43 268**	**110 238**	**158 491**
EU-15	**264 424**	**314 220**	**124 797**	**114 435**	**28 706**	**41 930**	**102 704**	**147 898**
BE	8 283	9 604	3 054	2 196	912	1 248	3 878	5 839
CZ	2 993	5 169	1 497	2 027	165	200	1 099	2 638
DK	4 144	4 719	1 819	2 011	617	739	1 603	1 875
DE	61 263	64 138	32 799	28 363	5 317	6 984	21 843	26 927
EE	399	679	219	322	12	20	136	329
EL	6 149	7 460	2 663	3 671	1 212	1 154	1 972	2 319
ES	24 864	34 882	9 662	8 638	2 763	4 294	11 649	21 051
FR	42 578	51 407	17 004	13 619	4 251	6 505	20 452	30 019
IE	2 139	4 384	1 022	1 667	308	782	780	1 913
IT	35 838	42 382	16 088	16 807	2 152	3 184	15 508	19 854
CY	685	897	181	241	254	310	249	344
LV	1 025	870	481	357	91	28	307	453
LT	1 412	1 175	683	376	67	31	649	613
LU	1 277	2 126	550	584	132	375	586	1 154
HU	2 602	3 482	1 532	1 403	137	205	841	1 782
MT	255	266	74	54	81	93	100	119
NL	11 204	14 578	3 778	4 387	1 973	3 393	4 387	6 127
AT	5 038	7 283	2 621	2 174	376	534	1 762	3 950
PL	7 718	8 982	3 944	4 432	234	423	3 051	2 845
PT	4 315	7 126	1 780	2 174	617	742	1 889	4 147
SI	885	1 390	610	807	11	28	252	541
SK	1 382	1 743	450	752	:	:	851	928
FI	4 089	4 548	2 083	1 923	398	493	1 536	2 029
SE	7 458	7 968	4 578	4 300	819	721	1 807	2 647
UK	45 786	51 614	25 297	21 919	6 859	10 782	13 051	18 049
IS	279	316	144	153	73	107	55	54
NO	4 018	4 606	1 770	1 728	510	639	1 581	2 078
BG	1 902	2 020	874	642	314	150	606	859
RO	4 810	4 269	2 119	1 831	373	100	1 841	2 146
TR	9 210	12 550	3 579	3 279	549	1 632	4 900	6 270

Data Source: Eurostat



(Mtoe)

EU-25	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	284	289	291	295	305	311	323	331	333	336	339
Motor Spirit	134	135	132	132	134	134	135	136	130	127	125
Gas/Diesel oil	110	113	116	119	125	129	137	141	147	154	158
Kerosenes	30	31	32	34	35	37	41	43	45	44	43
Other	9	10	10	10	11	11	11	11	11	11	12

Data Source: Eurostat

The 45% increase in kerosene consumption (the largest increase of fuels used in the transport sector) is directly related to the corresponding increase in air transport.

Due to the gradual shift towards diesel-engine cars the consumption of diesel grew rapidly. In the period 1992-2002 a 44% increase was observed for diesel while the decrease of petrol was slightly less than 7%.

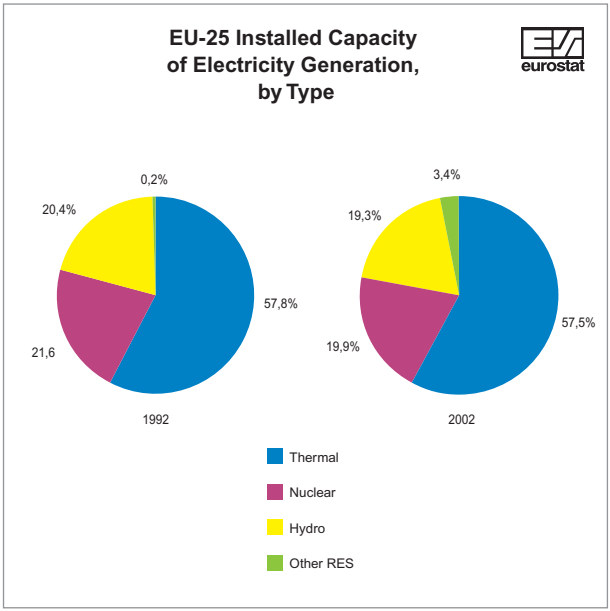
In 2002 the share in final energy consumption of transport by fuel was petrol 37%, diesel 47%, kerosene 13% and LPG, electricity and other fuels 3%, while in 1992 petrol held a share of 47%, diesel 39% and kerosene 10%.

Installed Capacity of Electricity Generation, by Type

(MW)

	Total		Thermal		Nuclear		Hydro		Others	
	1992	2002	1992	2002	1992	2002	1992	2002	1992	2002
EU-25	**568 103**	**685 243**	**328 467**	**393 781**	**122 475**	**135 994**	**115 780**	**131 945**	**1 381**	**23 523**
EU-15	**519 948**	**604 714**	**289 137**	**334 538**	**117 003**	**125 072**	**112 427**	**121 635**	**1 381**	**23 469**
BE	14 039	15 546	7 148	8 341	5 485	5 761	1 401	1 413	5	31
CZ	:	16 304	:	11 399	:	2 760	:	2 145	:	0
DK	10 031	13 327	9 563	10 430	-	-	10	11	458	2 886
DE	115 558	124 980	84 144	81 092	22 605	23 403	8 626	8 484	183	12 001
EE	3 000	2 180	3 000	2 180	-	-	-	-	-	-
EL	8 977	11 553	6 436	8 188	-	-	2 523	3 078	18	287
ES	43 841	60 195	20 380	29 941	7 020	7 577	16 395	17 879	46	4 798
FR	104 450	116 234	22 477	27 278	57 675	63 273	24 297	25 551	1	132
IE	3 933	5 429	3 411	4 760	-	-	516	531	6	138
IT	61 632	79 744	41 803	54 521	-	-	19 351	23 777	478	1 446
CY	546	1 004	546	1 004	-	-	-	-	-	-
LV	:	2 135	:	583	-	-	:	1 530	:	22
LT	6 135	6 564	2 628	2 648	3 000	3 000	507	916	-	-
LU	1 238	1 596	106	443	-	-	1 132	1 138	0	15
HU	7 278	8 513	5 390	6 599	1 840	1 866	48	48	-	-
MT	:	1 987	:	1 987	-	-	-	-	-	-
NL	17 480	20 800	16 829	19 635	505	449	37	38	109	678
AT	17 231	18 017	6 136	6 178	-	-	11 095	11 698	0	141
PL	28 665	30 815	26 622	28 576	-	-	2 043	2 207	0	32
PT	8 199	11 239	4 486	6 448	-	-	3 707	4 587	6	204
SI	2 531	2 953	1 144	1 338	632	656	755	959	-	-
SK	:	8 074	:	2 929	:	2 640	:	2 505	-	-
FI	13 357	16 566	8 317	10 888	2 360	2 671	2 679	2 964	1	43
SE	34 628	32 503	8 160	6 462	10 000	9 452	16 448	16 232	20	357
UK	65 354	76 985	49 741	59 933	11 353	12 486	4 210	4 254	50	312
IS	1 068	1 505	144	149	-	-	879	1 154	45	202
NO	27 030	27 960	0	268	-	-	27 030	27 679	0	13
BG	:	10 972	:	6 878	:	2 146	:	1 948	-	-
RO	22 129	19 588	16 442	12 639	-	707	5 687	6 242	-	-
TR	18 717	31 846	10 320	19 568	-	-	8 379	12 241	18	37

Data Source: Eurostat



(GW)

	EU-25		EU-15	
	1992	**2002**	**1992**	**2002**
Total	568	685	520	605
Thermal	328	394	289	335
Nuclear	123	136	117	125
Hydro	116	132	113	122
Other RES	1	23	1	23

Data Source: Eurostat

The reader must bear in mind that when analysing this table rough estimates for Czech Republic, Latvia, Malta and Slovakia were used for 1992 since no data were available.

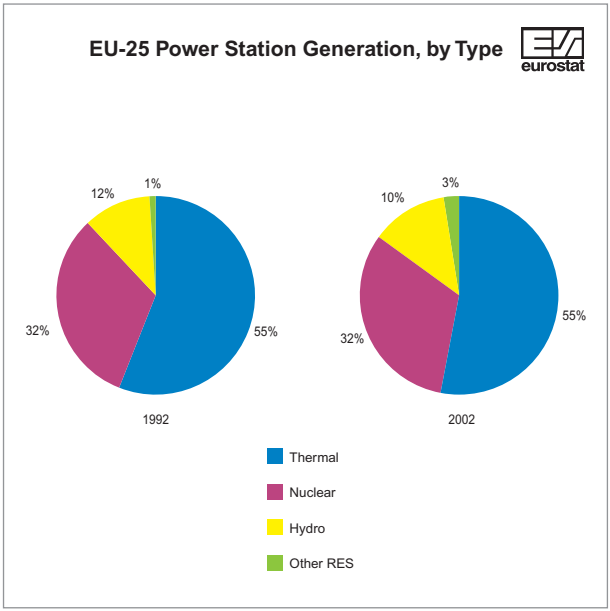
The total EU-25 installed capacity of electricity generation plants rose by approximately 16% between 1992 and 2002. Thermal power plants provided the majority of capacity and increased by 15%, while nuclear capacity rose by 8% during the same period. The most important figure in the above table is the extraordinary increase of the installed capacity of RES (other than hydro), which reached 23.5GW in 2002, however they still contribute only 3.4% to the total installed capacity of electricity generation plants.

Power Station Generation, by Type

(GWh)

	Total		Thermal		Nuclear		Hydro		Others RES	
	1992	2002	1992	2002	1992	2002	1992	2002	1992	2002
EU-25	**2 504 831**	**2 992 349**	**1 368 767**	**1 642 527**	**815 798**	**964 461**	**297 447**	**297 254**	**22 819**	**88 107**
EU-15	**2 211 182**	**2 655 231**	**1 142 989**	**1 393 399**	**759 925**	**894 147**	**285 961**	**280 794**	**22 307**	**86 891**
BE	71 445	80 930	27 112	31 500	43 456	47 360	341	358	536	1 712
CZ	59 131	75 993	45 243	54 265	12 250	18 738	1 638	2 492	0	498
DK	30 863	39 317	29 454	31 906	-	-	28	32	1 381	7 379
DE	533 410	566 905	353 829	355 395	158 804	164 842	17 100	23 124	3 677	23 544
EE	11 832	8 526	11 831	8 490	-	-	1	6	0	30
EL	37 226	53 945	35 015	50 494	-	-	2 203	2 800	8	651
ES	156 502	242 729	81 150	145 001	55 782	63 016	18 828	23 038	742	11 674
FR	459 491	553 877	50 071	52 198	338 445	436 760	69 749	61 136	1 226	3 783
IE	15 773	24 843	14 956	23 461	-	-	812	912	5	470
IT	226 116	281 320	180 202	233 364	-	-	42 199	39 519	3 715	8 437
CY	2 404	3 785	2 404	3 785	-	-	-	-	-	-
LV	3 834	3 975	1 313	1 491	-	-	2 521	2 463	0	21
LT	18 548	17 294	3 599	2 794	14 638	14 142	311	354	0	4
LU	660	2 794	548	2 595	-	-	70	113	42	86
HU	31 685	36 157	17 472	21 937	13 964	13 953	158	194	91	73
MT	1 490	1 987	1 490	1 987	-	-	-	-	-	-
NL	77 202	95 965	72 031	88 030	3 800	3 915	120	108	1 251	3 912
AT	49 929	60 409	13 979	18 707	-	-	34 848	39 931	1 102	1 771
PL	130 687	142 499	128 759	139 732	-	-	1 507	2 279	421	488
PT	29 665	45 746	24 128	35 754	-	-	4 646	7 800	891	2 192
SI	12 086	14 690	4 702	5 656	3 971	5 528	3 413	3 404	0	102
SK	21 952	32 212	8 965	8 991	11 050	17 953	1 937	5 268	-	-
FI	57 787	74 899	18 777	32 024	19 287	22 295	15 135	10 776	4 588	9 804
SE	145 716	146 698	5 681	7 292	63 544	68 111	74 368	66 360	2 123	4 935
UK	319 397	384 854	236 056	285 678	76 807	87 848	5 514	4 787	1 020	6 541
IS	4 776	9 849	236	1 439	-	-	4 310	6 977	230	1 433
NO	117 120	130 117	58	552	-	-	117 062	129 244	0	321
BG	35 610	42 169	21 995	19 753	11 552	20 222	2 063	2 194	-	-
RO	54 195	54 935	42 410	33 373	-	5 513	11 700	16 046	85	3
TR	67 412	129 505	40 727	95 538	-	-	26 568	33 684	117	283

Data Source: Eurostat



(TWh)

	EU-25		EU-15	
	1992	**2002**	**1992**	**2002**
Total	2 505	2 992	2 211	2 655
Thermal	1 369	1 643	1 143	1 393
Nuclear	816	964	760	894
Hydro	297	297	286	281
Other RES	23	88	22	87

Data Source: Eurostat

At EU-25 level there was an increase of 19% in total electricity generation over the 1992-2002 period. In 2002 thermal power plants accounted for 55% of total electricity generation, followed by nuclear power plants (32%), hydro plants (10%) and other RES (3%).

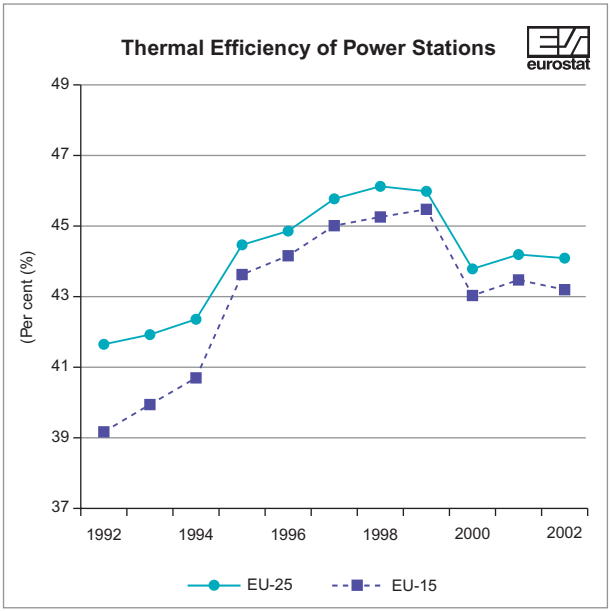
In 2002, 1 690TWh of electricity and 928 PJ of heat were provided by classic thermal power stations fuelled with solid fuels (57%), natural gas (26%) and oil products (10%).

Thermal Efficiency of Power Stations

Per cent (%)

	1992	1997	2002
EU-25	**41.6**	**45.6**	**44.0**
EU-15	**39.2**	**45.0**	**43.2**
Belgium	39.3	42.5	51.1
Czech Republic	59.0	50.7	47.9
Denmark	58.7	59.6	66.3
Germany	35.8	46.3	35.1
Estonia	48.8	41.6	42.0
Greece	32.9	33.7	35.9
Spain	35.5	39.7	42.3
France	40.5	38.7	39.4
Ireland	37.7	38.1	40.2
Italy	39.1	40.0	41.3
Cyprus	33.6	32.5	38.3
Latvia	63.4	74.0	80.2
Lithuania	70.3	80.7	74.7
Luxembourg	25.2	40.2	59.0
Hungary	42.8	44.4	48.7
Malta	39.8	29.2	31.8
Netherlands	43.8	51.4	52.6
Austria	54.2	51.9	57.7
Poland	49.6	46.3	47.6
Portugal	40.2	40.7	45.1
Slovenia	35.9	40.7	41.3
Slovakia	60.6	81.4	56.5
Finland	75.4	69.3	69.8
Sweden	73.0	85.8	88.0
United Kingdom	37.2	41.8	44.2
Iceland	34.6	29.5	27.9
Norway	53.3	78.1	86.6
Bulgaria	42.9	39.7	41.6
Romania	51.6	59.7	55.1
Turkey	34.8	35.3	40.2

Data Source: Eurostat



Per cent (%)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	41.6	41.9	42.3	44.2	44.8	45.6	46.0	46.0	43.7	44.3	44.0
EU-15	39.2	39.9	40.5	43.5	44.1	45.0	45.2	45.5	43.0	43.5	43.2

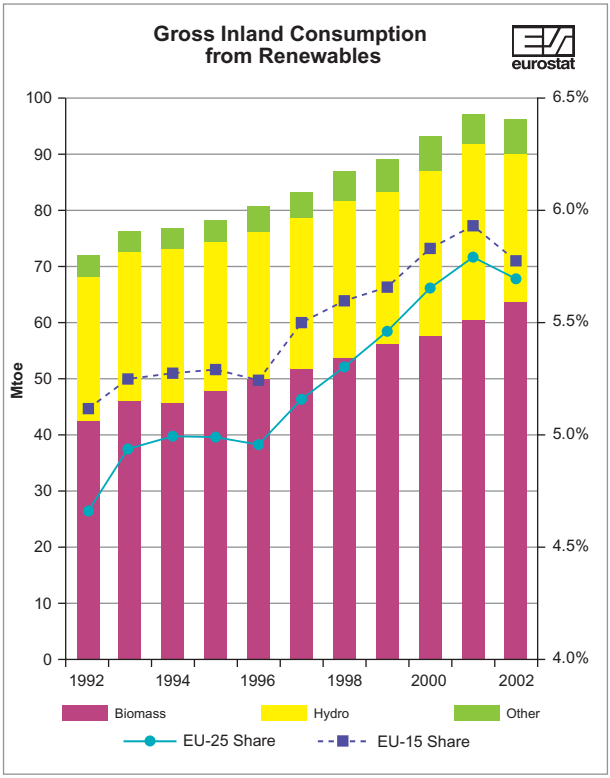
Data Source: Eurostat

The efficiency of thermal power stations is calculated as the ratio between the output of electricity and heat from electricity and CHP power plants and the input of fuels to these plants.
In 1992 EU-25 efficiency of thermal power stations was 41.6% while in 2002 it was 44%, 2.4% higher. Development of technologies, enhancement of fuels and the increase in CHP plants across the EU-25 are the basic factors that ensure the further increase of efficiency in the future.

Gross Inland Consumption from Renewables and Share on Total Gross Inland Consumption

							(ktoe)		Per cent (%)	
	Total		Hydro		Biomass		Other		Share	
	1992	2002	1992	2002	1992	2002	1992	2002	1992	2002
EU-25	**72 214**	**95 613**	**25 576**	**25 559**	**42 979**	**62 698**	**3 658**	**7 356**	**4.7**	**5.7**
EU-15	**68 480**	**85 480**	**24 588**	**24 144**	**40 232**	**54 118**	**3 658**	**7 219**	**5.1**	**5.8**
BE	660	819	29	31	628	780	3	8	1.3	1.6
CZ	650	910	141	214	509	696	-	-	1.5	2.2
DK	1 384	2 446	2	3	1 298	2 013	83	429	7.3	12.3
DE	5 853	10 605	1 470	1 988	4 328	7 093	56	1 524	1.7	3.1
EE	460	523	0	1	460	522	-	-	6.7	10.5
EL	1 162	1 396	189	241	899	996	74	159	5.0	4.7
ES	5 146	7 284	1 619	1 981	3 491	4 505	37	799	5.4	5.6
FR	18 390	16 094	5 997	5 257	12 254	10 689	138	149	7.9	6.1
IE	162	288	70	78	92	176	0	33	1.6	1.9
IT	7 941	9 126	3 628	3 398	1 117	2 131	3 196	3 596	5.1	5.3
CY	5	45	-	-	5	10	:	35	0.3	1.9
LV	217	1 456	217	212	:	1 243	-	1	3.9	34.8
LT	27	694	27	30	:	663	-	-	0.3	8.0
LU	48	56	6	10	42	44	0	2	1.3	1.4
HU	14	889	14	17	0	785	0	88	0.1	3.5
MT	-	-	-	-	-	-	-	-	-	-
NL	816	1 744	10	9	791	1 642	16	92	1.2	2.2
AT	5 513	7 422	2 996	3 433	2 492	3 885	24	103	21.4	24.0
PL	1 518	4 142	130	196	1 388	3 935	-	11	1.6	4.7
PT	2 211	3 643	399	671	1 794	2 838	17	135	12.1	14.0
SI	560	757	293	293	266	465	-	-	10.6	11.0
SK	284	716	167	453	118	262	:	2	1.6	3.9
FI	5 400	7 808	1 301	927	4 098	6 876	0	6	19.3	22.2
SE	12 383	13 936	6 394	5 706	5 982	8 174	7	56	26.7	27.1
UK	1 412	2 813	474	412	928	2 276	10	126	0.7	1.2
IS	1 369	2 462	371	600	0	2	998	1 861	65.9	72.8
NO	11 023	12 540	10 066	11 113	958	1 423	0	3	49.2	47.7
BG	340	828	177	189	163	639	-	-	1.6	4.4
RO	2 152	3 749	1 006	1 380	1 146	2 351	-	17	4.7	10.5
TR	10 000	9 693	2 284	2 896	7 207	5 973	509	824	18.3	12.9

Data Source: Eurostat



(Mtoe)

EU-25	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Total	72	76	77	78	81	83	87	89	93	98	96
Biomass	43	46	46	48	50	52	54	56	58	61	63
Hydro	26	26	27	26	26	27	28	28	29	30	26
Others	4	4	4	4	4	5	5	6	6	6	7
Share	4.7%	4.9%	5.0%	5.0%	4.9%	5.2%	5.3%	5.5%	5.6%	5.8%	5.7%

EU-15	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Share	5.1%	5.2%	5.3%	5.3%	5.3%	5.5%	5.6%	5.6%	5.8%	5.9%	5.8%

Data Source: Eurostat

The EU-25 gross inland consumption from renewables rose by more than 32% over the period 1992–2002 but still made only a small contribution of 5.7% in 2002 to total gross inland consumption. In 2002 the most significant contribution was that of biomass (accounting for 65% of gross inland consumption from renewables), followed by hydro (27%) and "other", mostly wind, (8%).

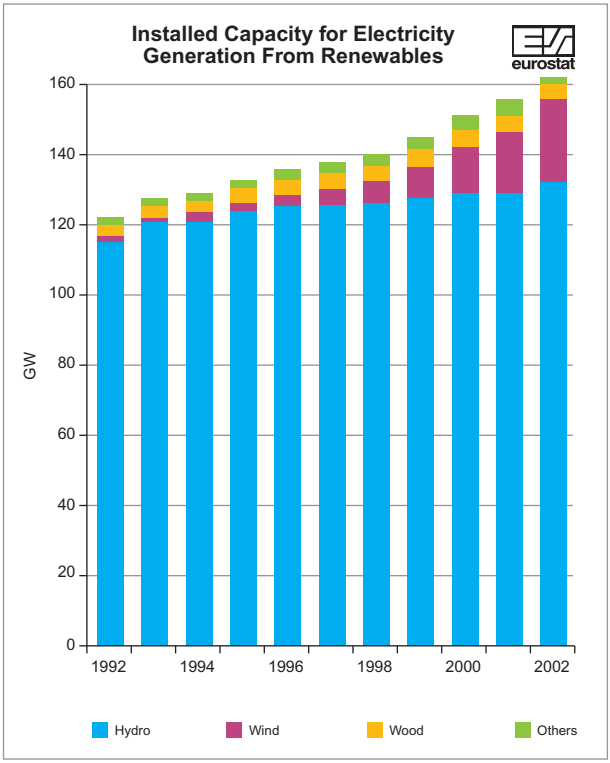
"Other" renewables such as solar, geothermal and wind increased by 100% over the period 1992–2002 with a very significant increase of solar and wind energy.

Installed Capacity for Electricity Generation From Renewables

(MW)

	Total		Hydro		Wind		Wood		Others	
	1992	2002	1992	2002	1992	2002	1992	2002	1992	2002
EU-25	**122 251**	**164 735**	**115 780**	**131 945**	**905**	**22 843**	**3 496**	**4 861**	**2 070**	**5 086**
EU-15	**118 898**	**154 267**	**112 427**	**121 635**	**905**	**22 789**	**3 496**	**4 801**	**2 070**	**5 042**
BE	1 516	1 665	1 401	1 413	5	31	110	57	-	164
CZ	:	2 145	:	2 145	-	-	-	-	-	-
DK	599	3 246	10	11	458	2 886	40	110	91	239
DE	9 670	22 195	8 626	8 484	183	12 001	77	285	784	1 425
EE	:	:	:	:	:	:	:	:	:	:
EL	2 588	3 388	2 523	3 078	16	287	47	0	2	23
ES	16 584	23 149	16 395	17 879	46	4 798	114	285	29	187
FR	24 666	26 302	24 297	25 551	1	132	195	340	173	279
IE	522	688	516	531	6	138	-	-	0	19
IT	19 950	25 832	19 351	23 777	7	780	9	155	583	1 120
CY	-	-	-	-	-	-	-	-	-	-
LV	:	1 552	:	1 530	-	22	-	-	-	-
LT	507	916	507	916	-	-	-	-	-	-
LU	1 138	1 162	1 132	1 138	-	15	-	-	6	9
HU	48	117	48	48	-	-	:	44	:	25
MT	-	-	-	-	-	-	-	-	-	-
NL	320	1 156	37	38	109	678	-	-	174	440
AT	11 502	11 840	11 095	11 698	-	141	400	:	7	1
PL	2 043	2 253	2 043	2 207	-	32	-	-	-	14
PT	3 919	5 098	3 707	4 587	3	190	206	233	3	88
SI	755	977	755	959	-	-	-	15	-	3
SK	:	2 508	:	2 505	-	-	-	1	-	2
FI	3 765	4 510	2 679	2 964	1	43	1 085	1 500	-	3
SE	17 699	18 452	16 448	16 232	20	357	1 200	1 670	31	193
UK	4 460	5 584	4 210	4 254	50	312	13	166	187	852
IS	924	1 356	879	1 154	-	-	-	-	45	202
NO	27 098	27 727	27 030	27 679	-	13	68	35	-	-
BG	:	1 948	:	1 948	-	-	-	-	-	-
RO	5 883	6 245	5 687	6 242	-	-	196	:	-	3
TR	8 397	12 359	8 379	12 241	-	19	:	72	18	27

Data Source: Eurostat



(GW)

EU-25	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Total	122	128	129	133	136	137	140	145	151	156	165
Hydro	116	121	121	124	125	125	126	127	129	129	132
Wind	1	1	2	2	3	5	6	9	13	17	23
Wood	3	4	4	4	4	4	4	5	5	5	5
Others	2	2	2	2	3	3	3	4	4	5	5

Data Source: Eurostat

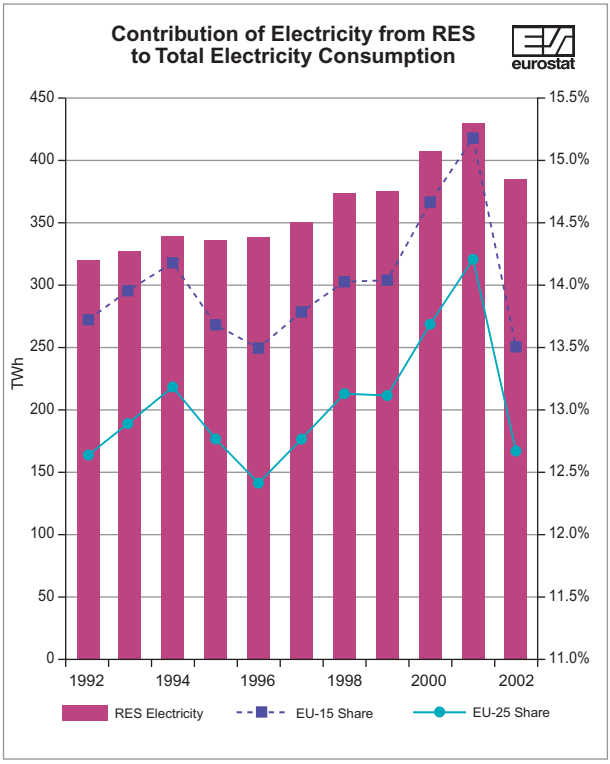
Between 1992 and 2002 the EU-25 installed capacity for electricity generation from renewables increased by 35%. The most important increase was registered by wind capacity. Less than a GW in 1992, wind experienced a rapid and high increase in many countries and reached 23 GW in 2002 which was a record year for wind capacity since more than 5.5 GW were installed.

In 2002, Germany and Spain had 74% of EU-25 wind capacity , Finland and Sweden had 65% of wood power plants while Germany, Italy and the United Kingdom had 67% of "others" i.e. municipal solid waste, biogas, geothermal and photovoltaic.

Contribution of Electricity from RES to Total Electricity Consumption

	RES electricity *(GWh)*			Share (%)		
	1992	**1997**	**2002**	**1992**	**1997**	**2002**
EU-25	**320 266**	**350 451**	**385 361**	**12.6**	**12.8**	**12.7**
EU-15	**308 268**	**334 907**	**367 685**	**13.7**	**13.8**	**13.5**
BE	877	862	2 070	1.2	1.0	2.3
CZ	1 638	2 193	2 990	2.9	3.5	4.6
DK	1 409	3 279	7 411	4.0	8.8	19.9
DE	20 777	23 779	46 668	3.9	4.3	8.0
EE	1	11	36	0.0	0.1	0.5
EL	2 211	3 919	3 451	5.8	8.6	6.0
ES	19 570	36 866	34 712	12.3	19.7	13.8
FR	70 975	64 983	64 919	17.3	14.8	13.4
IE	817	755	1 382	5.1	3.8	5.4
IT	45 914	46 446	47 956	17.6	16.0	14.3
CY	-	-	-	0.0	0.0	0.0
LV	2 521	2 954	2 484	31.9	46.7	39.3
LT	311	295	358	2.3	2.6	3.2
LU	112	129	199	2.2	2.0	2.8
HU	249	301	267	0.7	0.8	0.7
MT	-	-	-	0.0	0.0	0.0
NL	1 371	3 476	4 020	1.6	3.5	3.6
AT	35 950	37 690	41 702	69.5	67.2	66.0
PL	1 928	2 561	2 767	1.5	1.8	2.0
PT	5 537	14 228	9 992	17.6	38.3	20.8
SI	3 413	3 092	3 506	33.2	26.9	25.9
SK	1 937	4 137	5 268	7.5	14.5	18.6
FI	19 723	19 402	20 580	29.8	25.3	23.7
SE	76 491	72 051	71 295	52.9	49.1	46.9
UK	6 534	7 042	11 328	1.9	1.9	2.9
IS	4 540	5 582	8 410	99.9	99.9	99.9
NO	117 062	110 051	129 565	107.6	95.3	107.2
BG	2 063	2 765	2 194	5.4	7.0	6.0
RO	11 785	17 520	16 049	20.2	30.5	30.8
TR	26 685	40 193	33 967	39.7	38.1	25.6

Data Source: Eurostat



(TWh)

EU-25	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
RES Electricity	320	328	340	337	337	350	369	375	404	428	385
Share	12.6%	12.9%	13.2%	12.7%	12.4%	12.8%	13.1%	13.1%	13.7%	14.2%	12.7%

EU-15	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**
Share	13.7%	14.0%	14.2%	13.7%	13.4%	13.8%	14.0%	14.0%	14.7%	15.2%	13.5%

Data Source: Eurostat

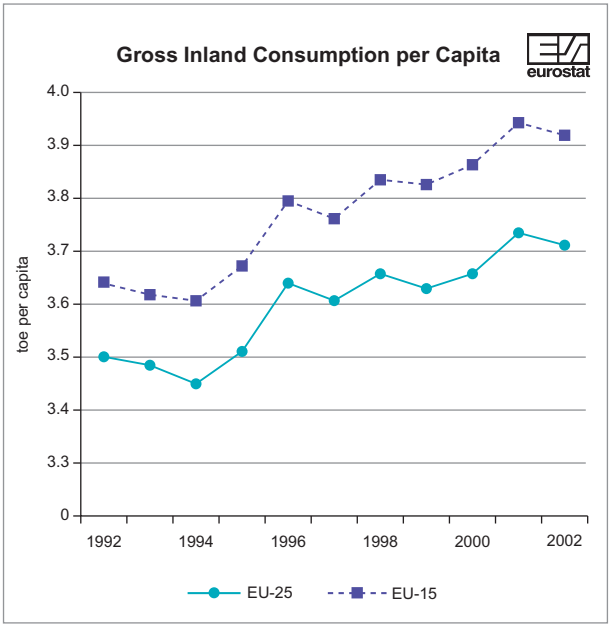
In 2002, EU-25 electricity generation from renewable energy sources was 385 TWh, while the contribution of renewables to total electricity consumption was 12.7%.

During the period 1992-2002 the electricity production from renewables increased by 20%, a little less than the gross inland consumption from renewables, attributed to the low production of hydro power plants of several countries in 2002. Another effect of the low hydro production was that the share of electricity from renewables in total electricity consumption did not show any significant change from 1992 to 2002.

Gross Inland Consumption per Capita

	(toe per capita)			*Index (1990=100)*		
	1992	**1997**	**2002**	**1992**	**1997**	**2002**
EU-25	**3.51**	**3.61**	**3.72**	**98.9**	**101.9**	**104.9**
EU-15	**3.64**	**3.76**	**3.92**	**100.4**	**103.6**	**107.9**
BE	5.01	5.42	5.10	105.6	114.1	107.3
CZ	4.19	4.08	4.02	91.8	89.5	88.1
DK	3.66	4.04	3.69	104.8	115.7	105.7
DE	4.24	4.21	4.17	94.2	93.6	92.6
EE	4.40	3.92	3.65	69.9	62.3	57.9
EL	2.23	2.38	2.71	101.6	108.3	123.3
ES	2.44	2.69	3.18	106.0	116.7	138.3
FR	4.10	4.18	4.47	103.3	105.4	112.7
IE	2.84	3.36	3.88	95.9	113.4	130.9
IT	2.77	2.85	3.05	102.6	105.4	112.8
CY	3.00	3.10	3.43	94.5	97.7	108.2
LV	2.08	1.36	1.79	135.4	88.5	116.0
LT	2.88	2.32	2.49	66.4	53.5	57.5
LU	9.73	8.04	8.96	103.9	85.9	95.7
HU	2.37	2.46	2.52	87.3	90.6	92.9
MT	1.72	2.48	2.09	104.3	150.4	126.5
NL	4.63	4.83	4.86	103.2	107.5	108.2
AT	3.30	3.56	3.84	101.8	109.9	118.6
PL	2.54	2.67	2.30	96.7	101.6	87.5
PT	1.84	2.06	2.51	108.2	121.0	147.6
SI	2.63	3.25	3.44	95.3	117.7	124.6
SK	3.32	3.14	3.45	83.5	79.1	87.0
FI	5.55	6.38	6.76	96.2	110.6	117.2
SE	5.36	5.68	5.77	97.0	102.9	104.5
UK	3.72	3.78	3.82	101.3	102.9	103.9
IS	7.99	9.33	11.80	91.6	106.9	135.3
NO	5.25	5.56	5.81	103.0	109.2	114.0
BG	2.41	2.46	2.37	75.6	77.2	74.4
RO	2.01	1.93	1.64	76.2	73.1	62.0
TR	0.94	1.11	1.08	100.6	119.8	115.9

Data Source: Eurostat



(toe per capita)

	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	3.51	3.48	3.45	3.52	3.64	3.61	3.65	3.63	3.66	3.73	3.72
EU-15	3.64	3.62	3.60	3.67	3.79	3.76	3.83	3.83	3.86	3.93	3.92

Data Source: Eurostat

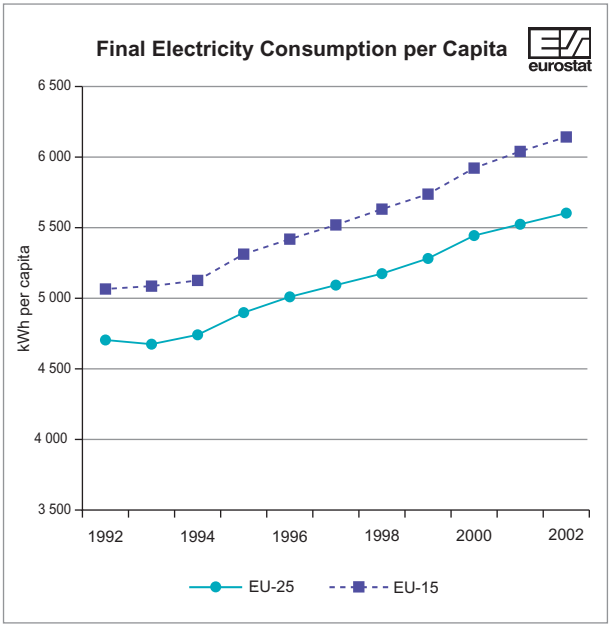
Over the period 1992-2002 EU-25 gross inland consumption per capita showed a small increase of 6.0% while that of the EU-15 increased by 7.5%. The EU-25 average was 3.72 toe per capita in 2002 but with a wide range of values distributed across countries. Moreover, during the period 1992-2002, 18 countries experienced an increase in gross inland consumption per capita while only 7 countries showed a decrease.

In 2002 the gross inland consumption per capita in the United States and Canada was almost 8 toe per capita i.e. more than double the EU-25 level, while on the other hand in Japan it was just above 4 toe per capita.

Final Electricity Consumption per Capita

	(kWh per capita)			*Index (1990=100)*		
	1992	**1997**	**2002**	**1992**	**1997**	**2002**
EU-25	**4 688**	**5 094**	**5 607**	**100.2**	**108.9**	**119.8**
EU-15	**5 073**	**5 513**	**6 093**	**101.7**	**110.6**	**122.2**
BE	6 237	7 061	7 609	107.0	121.1	130.5
CZ	4 207	4 811	4 976	90.5	103.5	107.0
DK	5 852	6 043	6 054	102.7	106.0	106.2
DE	5 336	5 630	6 051	94.5	99.8	107.2
EE	3 694	3 660	3 873	85.3	84.5	89.4
EL	2 975	3 450	4 245	105.8	122.7	150.9
ES	3 354	4 029	5 056	103.5	124.3	156.0
FR	5 779	6 112	6 629	108.3	114.5	124.2
IE	3 723	4 570	5 598	110.0	135.0	165.4
IT	3 927	4 313	4 953	104.0	114.2	131.2
CY	3 514	3 575	4 798	114.7	116.7	156.6
LV	2 508	1 832	2 067	76.8	56.1	63.3
LT	2 474	1 873	1 926	76.1	57.6	59.2
LU	10 909	12 314	12 776	100.3	113.2	117.4
HU	2 731	2 799	3 094	89.7	91.9	101.6
MT	3 493	3 637	4 731	135.3	140.8	183.2
NL	5 146	5 750	6 193	104.2	116.5	125.4
AT	5 660	6 039	6 834	101.4	108.2	122.4
PL	2 234	2 449	2 472	88.8	97.3	98.2
PT	2 575	3 172	4 015	108.5	133.6	169.2
SI	4 366	4 957	5 908	89.5	101.6	121.1
SK	3 838	4 246	4 222	86.7	95.9	95.4
FI	11 882	13 709	15 338	100.3	115.7	129.4
SE	13 900	14 174	14 735	98.5	100.4	104.4
UK	4 861	5 250	5 618	101.8	109.9	117.6
IS	14 785	17 460	26 237	96.0	113.3	170.3
NO	23 255	23 652	23 928	101.7	103.4	104.6
BG	3 045	3 192	3 046	75.7	79.3	75.7
RO	1 793	1 699	1 629	83.0	78.6	75.4
TR	886	1 250	1 457	110.8	156.3	182.2

Data Source: Eurostat



(kWh per capita)

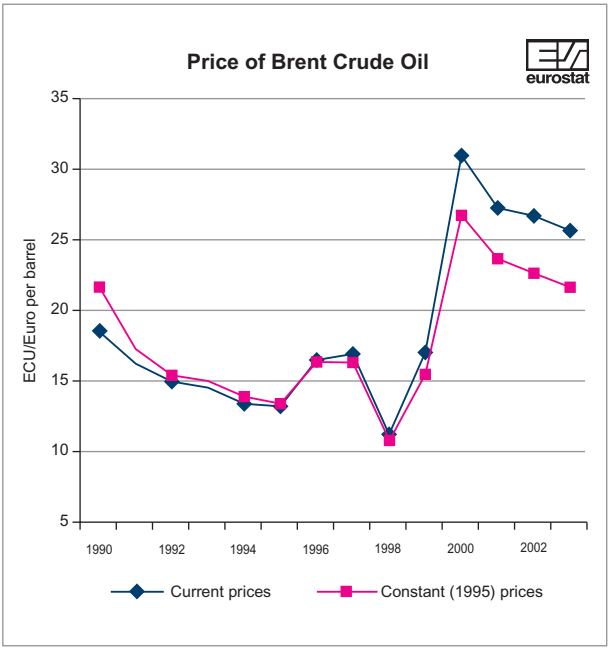
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	4 688	4 677	4 734	4 889	5 015	5 094	5 197	5 280	5 440	5 549	5 607
EU-15	5 073	5 075	5 136	5 299	5 424	5 513	5 639	5 742	5 915	6 029	6 093

Data Source: Eurostat

Between 1992 and 2002 EU-25 final electricity consumption per capita rose by 20% continuing the trend observed in preceding years. Moreover, the increase was significantly greater than the 6.0% growth in gross inland consumption per capita. This was due to the growing share of electricity in the total final consumption in all sectors.

The EU-25 average was 5 607 kWh/head in 2002 but several countries such as Sweden, Finland and Luxembourg had significantly higher values, among the highest worldwide and more than double the EU-25 average. Portugal, Ireland and Spain experienced more than 50% increase in the period 1992-2002 but were still below EU-25 average by 2002.

Price of Brent Crude Oil



(ECU/Euro per barrel)

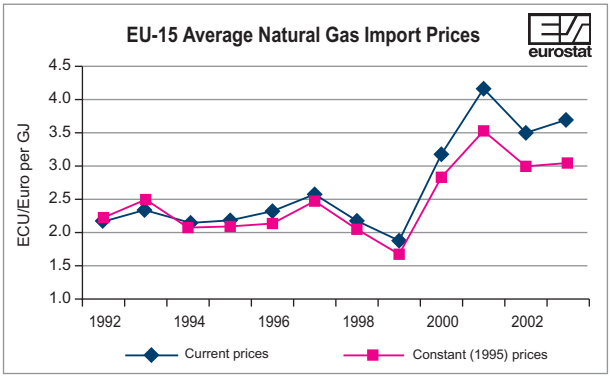
	1990	1992	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
Current prices	18.6	14.9	13.3	13.0	16.3	16.8	11.3	16.9	30.9	27.3	26.5	25.5
Constant (1995) prices	21.1	15.6	13.6	13.0	16.0	16.2	10.6	15.3	27.0	23.5	22.6	21.6

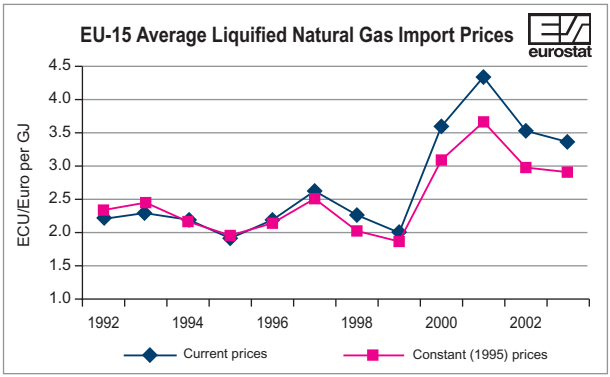
Data Source: Platt's European Marketscan, BP Statistical Review

Crude oil prices behave much as any other commodity with wide price swings in times of shortage or oversupply. The crude oil price cycle may extend over several years responding to changes in demand as well as OPEC and non-OPEC supply.

The price increases of 1996 and 1997 came to a rapid end when the impact of the economic crisis in Asia was either ignored or severely underestimated by OPEC. Late in 1997 OPEC increased its quota by 10 percent while on the other hand the rapid growth in Asian economies had come to a halt and in 1998 Asian Pacific oil consumption declined for the first time since 1982. The combination of lower consumption and higher OPEC production sent prices into a downward spiral. In response OPEC cut quotas by 1.25 million b/d in April '98 and 1.33 million b/d in July '98. Prices continued to drop through December '98 but OPEC reduced another 1.72 million barrels in April '99. After 4 consecutive increases totalling 3.73 million b/d prices reached their highest levels at the end of 2000 from when yearly average prices subsided.

Average Gas Import Prices





(ECU/Euro per GJ)

Natural gas	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
Current prices	2.16	2.27	2.12	2.14	2.22	2.53	2.21	1.86	3.17	4.14	3.55	3.66
Constant (1995) prices	2.26	2.39	2.17	2.14	2.18	2.43	2.06	1.68	2.77	3.56	3.02	3.10
Liquified natural gas (LNG)												
Current prices	2.22	2.29	2.15	1.90	2.19	2.65	2.26	1.98	3.53	4.33	3.53	3.38
Constant (1995) prices	2.32	2.41	2.20	1.90	2.16	2.54	2.11	1.80	3.10	3.73	3.01	2.86

Data Source: OECD/IEA

The average gas import prices for natural gas and LNG remained rather stable in the EU-15 over the period from 1992 to 1998 at around 2.2 Euro per GJ. After falling moderately in 1999 gas import prices followed a steep increase over the next two years showing a link to crude oil prices. In 2002, there was a fall in natural gas prices reflecting the drop in oil prices. In 2003, the price of LNG continued to drop while that of natural gas transported via pipelines increased slightly.

Vat-free Industrial Fuel Prices

RESIDUAL FUEL OIL *(ECU/Euro per GJ) (NCV)*

	1990	1995	2000	2001	2002	2003	2004
EU-15	**3.24**	**3.59**	**5.03**	**5.85**	**5.48**	**6.40**	**5.78**
Belgium	2.90	2.86	3.55	3.97	3.53	4.99	3.70
Denmark	:	:	11.60	12.34	12.50	13.21	12.02
Germany	3.22	3.06	3.88	4.11	4.24	5.06	4.13
Greece	3.17	3.89	5.23	5.92	4.91	6.27	5.24
Spain	3.19	3.59	4.86	6.10	5.26	6.32	5.01
France	3.01	3.54	4.13	4.73	4.77	5.44	4.33
Ireland	3.46	3.34	:	:	:	:	6.39
Italy	3.56	3.61	4.74	5.33	5.06	5.98	5.45
Luxembourg	3.02	3.08	3.94	4.52	3.64	5.22	4.41
Netherlands	4.23	4.10	5.00	5.50	5.05	5.93	5.93
Austria	:	2.93	4.12	4.77	4.21	5.83	4.48
Portugal	3.49	3.70	5.12	7.35	6.18	6.35	5.60
Finland	:	:	5.19	5.55	6.94	7.97	6.53
Sweden	:	8.18	10.47	13.34	11.73	13.77	14.55
United Kingdom	2.98	3.04	:	:	:	6.10	5.06

NATURAL GAS *(ECU/Euro per GJ) (NCV)*

	1990	1995	2000	2001	2002	2003	2004
EU-25	**:**	**:**	**:**	**:**	**:**	**:**	**5.26**
EU-15	**3.92**	**3.80**	**4.35**	**6.24**	**5.68**	**5.57**	**5.36**
Belgium	3.89	3.66	4.05	6.15	4.96	5.13	4.98
Czech Republic	:	:	3.31	4.22	5.01	4.35	4.44
Denmark	:	3.52	4.76	6.16	4.81	5.76	5.23
Germany	5.03	4.86	4.94	7.85	7.30	7.42	7.17
Estonia	:	:	:	:	:	2.94	2.66
Greece	-	-	-	-	-	-	-
Spain	3.82	3.12	4.33	5.98	4.65	5.01	4.57
France	3.40	3.17	4.25	6.11	4.78	5.26	4.81
Ireland	2.53	:	:	:	5.01	5.37	:
Italy	3.43	3.64	4.45	6.49	5.80	5.59	:
Cyprus	-	-	-	-	-	-	-
Latvia	:	:	:	:	:	:	3.81
Lithuania	:	:	:	:	:	4.44	4.02
Luxembourg	4.33	4.28	5.36	7.34	5.69	4.70	4.22
Hungary	:	2.46	2.47	3.76	4.61	4.92	5.05
Malta	-	-	-	-	-	-	-
Netherlands	3.15	3.39	4.08	:	:	:	:
Austria	:	:	6.08	7.36	6.53	:	:
Poland	:	:	:	4.61	6.02	4.55	4.12
Portugal	:	:	:	:	4.63	4.41	4.14
Slovenia	:	4.30	4.44	7.01	6.20	5.46	5.00
Slovakia	:	:	:	:	:	:	5.73
Finland	:	2.92	4.81	5.80	5.44	5.62	5.49
Sweden	:	:	:	9.36	8.59	6.92	7.47
United Kingdom	3.75	3.43	3.31	3.91	5.66	4.33	4.14

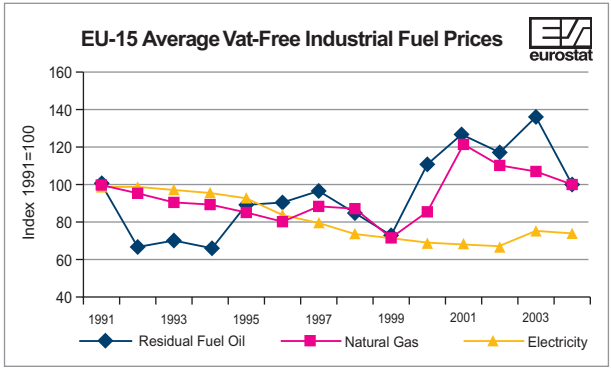
Data Source: Eurostat DG for Energy and Transport

eurostat

ELECTRICITY *(ECU/Euro per GJ) (NCV)*

	1990	1995	2000	2001	2002	2003	2004
EU-25	**:**	**:**	**:**	**:**	**:**	**:**	**16.64**
EU-15	**17.18**	**17.41**	**15.14**	**15.23**	**15.20**	**17.03**	**17.00**
Belgium	15.97	16.75	15.36	15.89	16.22	16.39	16.56
Czech Republic	:	:	11.42	10.92	11.94	11.56	11.11
Denmark	12.17	13.03	:	:	:	:	:
Germany	20.65	22.31	15.19	14.83	14.76	18.06	20.56
Estonia	:	:	:	:	9.69	11.50	11.50
Greece	15.33	13.39	13.33	13.33	13.89	14.44	14.67
Spain	19.67	17.14	15.64	14.28	13.61	13.89	14.17
France	13.75	15.58	13.64	13.39	13.53	13.61	13.89
Ireland	14.56	14.06	14.72	14.75	18.00	18.06	19.03
Italy	16.67	17.33	20.03	23.56	23.11	25.00	23.22
Cyprus	:	:	22.83	27.50	23.25	25.22	21.64
Latvia	:	:	:	:	:	:	9.97
Lithuania	:	:	:	:	:	13.36	13.36
Luxembourg	13.42	13.42	12.39	10.94	11.14	11.67	11.97
Hungary	:	7.56	10.92	11.14	12.69	12.86	14.67
Malta	:	14.28	16.28	16.47	16.83	16.08	15.69
Netherlands	12.11	13.17	:	:	:	:	:
Austria	:	19.11	:	:	:	:	17.14
Poland	:	:	:	11.53	14.33	13.75	12.14
Portugal	17.81	18.19	14.58	14.72	15.44	15.56	16.97
Slovenia	:	12.89	14.14	14.14	14.97	13.11	14.56
Slovakia	:	:	:	:	:	:	18.28
Finland	:	12.28	10.56	10.47	11.33	15.83	15.39
Sweden	:	:	7.86	6.75	7.28	17.22	12.36
United Kingdom	15.78	14.40	16.00	14.78	14.56	12.78	11.14

Data Source: Eurostat



(ECU/Euro per GJ)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Residual Fuel Oil	3.98	2.66	2.76	2.64	3.59	3.66	3.84	3.41	2.89	4.40	5.04	4.67	5.41	4.78
Natural Gas	4.40	4.22	4.02	3.99	3.80	3.55	3.94	3.86	3.21	3.81	5.37	4.84	4.71	4.43
Electricity	18.80	18.66	18.48	18.15	17.41	16.09	15.15	14.06	13.80	13.25	13.12	12.96	14.40	14.06

Constant (1995) prices

Data Source: Eurostat DG for Energy and Transport

Tax-inclusive Household Fuel Prices

HEATING GAS OIL *(ECU/Euro per GJ) (NCV)*

	1990	1995	2000	2001	2002	2003	2004
EU-15	**8.88**	**8.02**	**10.88**	**11.87**	**10.20**	**12.39**	**11.29**
Belgium	5.34	4.88	7.65	9.02	7.50	8.76	8.32
Denmark	14.57	14.53	18.77	19.24	18.28	19.94	19.79
Germany	6.28	5.88	9.00	10.37	8.60	11.03	9.19
Greece	5.42	8.66	7.65	8.64	8.32	9.57	9.05
Spain	7.29	6.95	9.88	10.80	9.32	11.78	10.29
France	9.23	8.47	11.30	11.21	8.63	11.52	10.81
Ireland	7.44	6.04	11.14	13.81	10.93	12.79	12.20
Italy	16.03	16.92	22.13	22.60	22.43	24.05	23.39
Luxembourg	6.19	5.40	7.70	8.52	7.15	8.91	8.25
Netherlands	8.38	8.05	13.48	16.24	15.17	17.10	16.71
Austria	:	8.63	10.86	11.38	10.22	11.61	11.74
Portugal	:	:	9.19	9.88	9.87	12.78	11.68
Finland	:	:	9.55	12.48	9.18	10.93	10.49
Sweden	:	12.98	15.05	18.47	17.82	19.19	21.44
United Kingdom	5.84	4.86	8.07	8.88	6.92	7.64	7.52

NATURAL GAS *(ECU/Euro per GJ) (NCV)*

	1990	1995	2000	2001	2002	2003	2004
EU-25	**:**	**:**	**:**	**:**	**:**	**:**	**10.82**
EU-15	**8.53**	**9.99**	**10.98**	**12.80**	**12.26**	**12.40**	**11.31**
Belgium	8.45	9.72	10.46	13.16	11.68	11.98	11.71
Czech Republic	:	:	4.84	6.11	7.87	7.06	7.30
Denmark	:	:	20.16	24.45	19.98	21.09	21.24
Germany	8.00	9.86	10.17	13.69	13.17	13.48	13.70
Estonia	:	:	:	:	:	5.15	5.15
Greece	-	-	-	-	-	-	-
Spain	11.29	11.15	11.80	14.25	13.48	13.44	12.83
France	8.84	9.35	9.18	11.01	12.01	11.83	12.01
Ireland	9.94	8.92	9.10	9.10	9.09	9.17	10.00
Italy	13.18	15.19	17.34	20.14	18.90	18.49	:
Cyprus	-	-	-	-	-	-	-
Latvia	:	:	:	:	:	:	4.69
Lithuania	:	:	:	:	:	:	6.06
Luxembourg	5.39	6.06	6.69	8.99	7.82	8.14	7.86
Hungary	:	3.28	3.69	3.98	4.83	4.90	6.42
Malta	-	-	-	-	-	-	-
Netherlands	6.93	8.21	10.04	11.73	12.83	14.53	14.66
Austria	:	:	11.85	13.16	13.16	13.62	14.81
Poland	:	:	:	7.17	9.00	8.00	7.05
Portugal	-	-	:	:	15.39	14.82	13.39
Slovenia	:	6.29	7.99	11.74	10.90	10.97	10.71
Slovakia	:	:	:	:	:	:	8.07
Finland	:	:	:	:	:	:	:
Sweden	:	:	14.44	17.90	19.18	20.36	21.74
United Kingdom	6.39	7.13	7.74	7.32	7.75	7.66	7.59

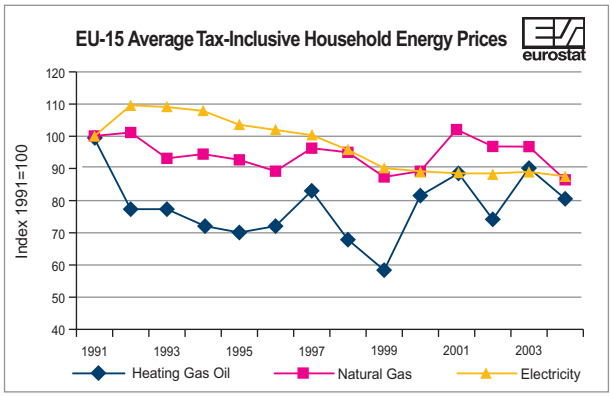
Data Source: Eurostat DG for Energy and Transport

eurostat

ELECTRICITY *(ECU/Euro per GJ) (NCV)*

	1990	1995	2000	2001	2002	2003	2004
EU-25	**:**	**:**	**:**	**:**	**:**	**:**	**34.41**
EU-15	**29.97**	**34.90**	**34.04**	**34.56**	**34.90**	**35.36**	**35.49**
Belgium	31.9	37.6	36.7	37.7	37.3	36.8	38.1
Czech Republic	:	:	13.5	15.7	19.7	18.4	18.3
Denmark	34.9	38.2	51.1	54.0	57.6	60.3	59.5
Germany	32.6	40.5	39.0	40.3	42.0	43.2	43.6
Estonia	:	:	:	:	15.2	16.6	16.6
Greece	22.0	22.1	19.1	19.0	19.7	20.6	21.1
Spain	28.8	31.3	27.8	26.7	26.7	27.1	27.5
France	30.3	35.0	32.1	31.4	31.8	30.6	30.8
Ireland	22.7	22.4	23.9	23.9	26.0	30.3	31.8
Italy	41.7	50.8	51.3	54.8	51.4	53.8	52.8
Cyprus	:	:	25.1	30.0	25.5	28.9	29.9
Latvia	:	:	:	:	:	:	16.2
Lithuania	:	:	:	:	:	:	18.0
Luxembourg	27.5	30.4	30.2	31.5	32.8	34.0	34.8
Hungary	:	15.9	19.9	20.2	23.1	23.4	28.2
Malta	:	14.6	22.7	23.0	23.5	22.4	21.9
Netherlands	24.0	25.1	39.4	47.2	45.4	47.9	49.9
Austria	:	:	34.3	36.9	37.1	36.0	36.6
Poland	:	:	:	23.8	25.5	23.9	21.8
Portugal	25.8	32.6	30.9	31.1	31.8	32.6	33.3
Slovenia	:	18.3	25.2	25.4	26.3	25.5	25.8
Slovakia	:	:	:	:	:	:	27.4
Finland	:	20.4	20.8	20.5	21.9	23.2	25.3
Sweden	:	:	26.4	26.9	29.2	34.4	37.3
United Kingdom	21.7	25.8	28.1	26.5	27.3	25.4	23.3

Data Source: Eurostat



(ECU/Euro per GJ)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Heating Gasoil	11.64	9.06	9.04	8.41	8.04	8.37	9.73	7.93	6.83	9.53	10.22	8.69	10.48	9.34
Natural Gas	10.80	10.91	10.06	10.23	9.94	9.66	10.42	10.26	9.47	9.61	11.02	10.45	10.49	9.35
Electricity	33.57	36.76	36.53	36.31	34.90	34.47	33.58	32.38	30.59	29.81	29.77	29.75	29.91	29.36

Constant (1995) prices

Data Source: Eurostat DG for Energy and Transport

eurostat

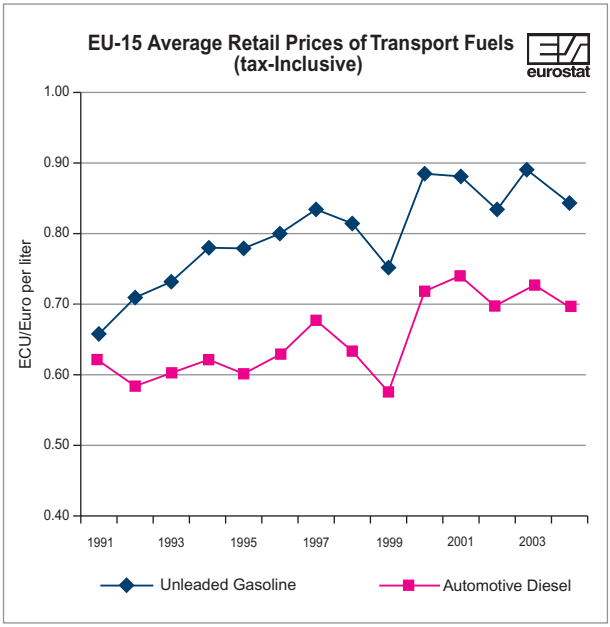
Retail Prices of Transport Fuels (tax-Inclusive)

(ECU/Euro per liter)

		BE	DK	DE	EL	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK	**EU-15**
Unleaded Gasoline	1990	:	:	:	:	:	:	:	:	:	0.69	:	:	:	:	0.53	**:**
	1995	0.78	0.75	0.81	0.64	0.64	0.85	0.69	0.79	0.63	0.87	0.76	0.79	:	0.82	0.68	**0.78**
	2000	0.96	1.00	0.96	0.67	0.75	1.04	0.82	1.01	0.74	1.06	0.87	0.80	1.06	1.00	1.22	**1.01**
	2002	0.95	1.04	0.99	0.69	0.77	0.96	0.80	1.00	0.74	1.10	0.82	0.86	1.00	0.95	1.13	**0.98**
	2003	0.98	1.11	1.11	0.75	0.83	1.05	0.87	1.07	0.79	1.16	0.90	0.95	1.08	1.02	1.14	**1.05**
	2004	0.99	1.07	1.08	0.74	0.81	1.00	0.87	1.05	0.83	1.19	0.86	0.95	1.05	1.02	1.10	**1.02**
Automotive Diesel	1990	0.51	0.59	0.52	0.20	0.45	0.52	0.72	0.61	0.36	0.47	:	0.47	:	:	0.54	**0.53**
	1995	0.62	0.62	0.59	0.47	0.51	0.59	0.66	0.63	0.51	0.61	0.62	0.54	:	0.78	0.69	**0.60**
	2000	0.73	0.82	0.76	0.62	0.62	0.81	0.77	0.84	0.63	0.78	0.73	0.55	0.77	0.81	1.26	**0.81**
	2002	0.72	0.80	0.81	0.60	0.67	0.75	0.74	0.84	0.62	0.77	0.70	0.65	0.78	0.80	1.21	**0.81**
	2003	0.74	0.86	0.90	0.66	0.72	0.82	0.79	0.89	0.65	0.80	0.75	0.70	0.82	0.86	1.16	**0.86**
	2004	0.73	0.82	0.88	0.64	0.70	0.79	0.80	0.88	0.62	0.83	0.73	0.70	0.78	0.85	1.13	**0.84**

Current prices

Data Source: DG for Energy and Transport



(ECU/Euro per liter)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Unleaded Gasoline	0.66	0.70	0.73	0.78	0.78	0.80	0.84	0.81	0.75	0.89	0.88	0.84	0.89	0.85
Automotive Diesel	0.62	0.58	0.60	0.62	0.60	0.63	0.68	0.63	0.58	0.71	0.74	0.69	0.73	0.69

Constant (1995) prices

Data Source: DG for Energy and Transport

At 1995 constant prices, the retail (tax inclusive) price of unleaded gasoline rose by 28% while that of diesel increased by 12% during the period 1991-2004. The price of unleaded gasoline was maintained low during the early 1990s to encourage conversion from leaded to unleaded motor spirit. However, on average diesel remained about 18% cheaper than unleaded gasoline.

Both types of fuel showed related trends with similar volatility over the period 1990 to 1999 reflecting global oil market price developments. In 2000 the price of both unleaded gasoline and diesel increased due to the rapid rise in world oil prices and remained high for the following years.

TRANSPORT INDICATORS

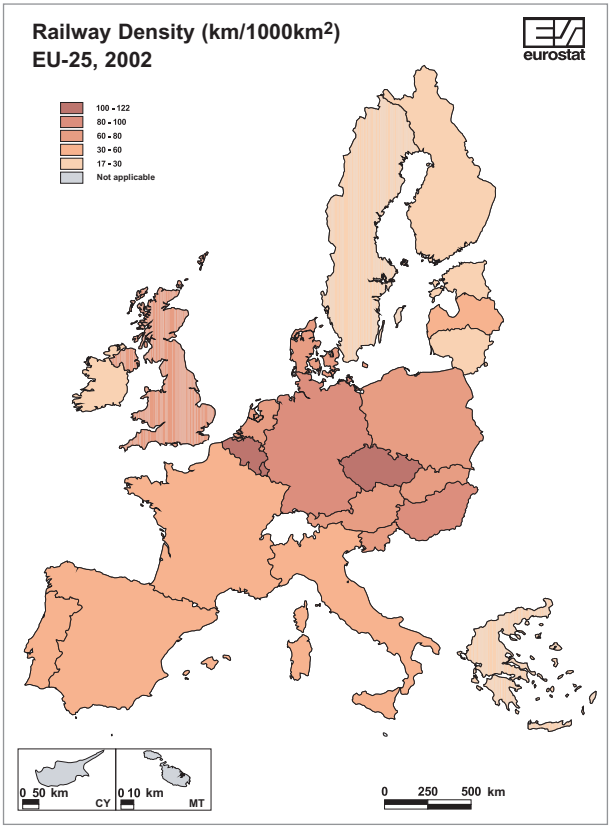
Railway Density

Length(km)/surface (1000km²)

	1997	1998	1999	2000	2001	2002
EU-25	***53***	***52***	***52***	***52***	***51***	***51***
EU-15	***49***	***49***	***49***	***48***	***48***	***48***
Belgium	112	114	114	114	113	115
Czech Republic	120	120	120	120	121	122
Denmark	52	53	64	64	64	64
Germany	108	107	105	102	101	100
Estonia	23	21	21	21	21	21
Greece	19	17	17	18	18	18
Spain	32	32	32	32	32	33
France	58	58	58	57	57	57
Ireland	27	27	27	27	27	27
Italy	53	53	53	53	53	53
Cyprus	-	-	-	-	-	-
Latvia	37	37	38	36	36	35
Lithuania	31	31	29	29	26	27
Luxembourg	106	106	106	106	106	106
Hungary	82	82	82	82	83	83
Malta	-	-	-	-	-	-
Netherlands	*68*	*68*	*68*	*68*	*69*	*68*
Austria	68	67	67	66	71	67
Poland	75	74	73	72	68	67
Portugal	33	30	31	31	31	30
Slovenia	59	59	59	59	61	61
Slovakia	75	75	75	75	75	75
Finland	17	17	17	17	17	17
Sweden	24	24	25	25	24	25
United Kingdom	70	70	70	70	70	70
Iceland	-	-	-	-	-	-
Liechtenstein*	119	119	119	119	*119*	*119*
Norway	12	12	12	13	13	13
Switzerland	122	122	123	123	122	*122*
Bulgaria	39	39	39	39	39	39
Romania	48	46	46	46	46	46
Turkey	11	11	11	11	11	11

* The 19km of railways in Liechtenstein are operated by the Austrian railways

Data Source: Eurostat, DG for Energy and Transport



In the EU-25, there was a slight decrease in the density of railway lines over the observed period. The highest density is to be found in Czech Republic, Belgium and Luxembourg while the lowest density can be found in Estonia, Greece and Finland. Finland is a typical case of a country with low population density while the low railway density for Greece is mainly due to the geographical characteristic of the country. Cyprus, Malta and Iceland do not have any railway network; Norway and Turkey have a low density, whereas Switzerland is well above the EU average.

In 2002, the railway network of Germany (35 804 km) was the longest one among the EU-25 countries, followed by the network of France (31 320 km) and Poland (21 073 km). In 2002, the total length of railways for the EU-25 was 203 950 km.

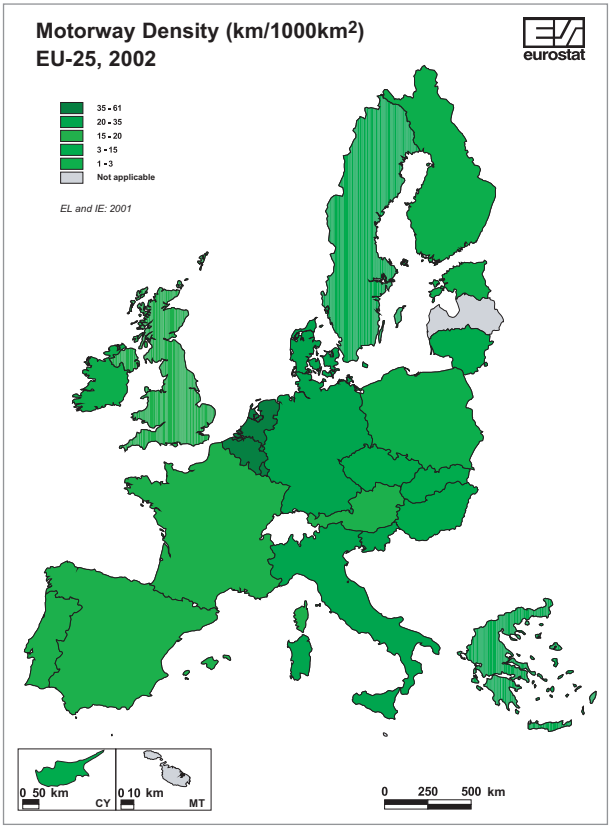
Motorway Density

Length(km)/surface (1000km²)

	1997	1998	1999	2000	2001	2002
EU-25	***13***	***13***	***13***	***14***	***14***	**:**
EU-15	***15***	***15***	***16***	***16***	***16***	**:**
Belgium	55	55	55	56	57	57
Czech Republic	6	6	6	6	7	7
Denmark	20	20	21	22	23	23
Germany	32	32	32	33	33	34
Estonia	2	2	2	2	2	2
Greece	3	3	3	5	6	:
Spain	15	16	18	18	19	*20*
France	16	17	18	18	18	19
Ireland	1	1	1	1	2	:
Italy	21	21	21	21	21	21
Cyprus	22	22	23	26	28	29
Latvia	-	-	-	-	-	-
Lithuania	6	6	6	6	6	6
Luxembourg	44	44	44	44	44	*44*
Hungary	4	5	5	5	5	6
Malta	-	-	-	-	-	-
Netherlands*	*57*	*54*	*56*	*56*	*61*	*61*
Austria	19	19	19	19	20	20
Poland	1	1	1	1	1	1
Portugal	9	14	16	16	18	20
Slovenia	16	18	20	21	21	23
Slovakia	4	6	6	6	6	6
Finland	1	1	2	2	2	2
Sweden	3	3	3	3	3	3
United Kingdom	14	14	15	15	15	15
Iceland	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-
Norway	0	0	0	0	0	1
Switzerland**	30	31	31	31	32	32
Bulgaria	3	3	3	3	3	3
Romania	0	0	0	0	0	0
Turkey	2	2	2	2	2	2

* break in 2001. Data on roads with separated lanes are reported for 2001-2002
** only state motorways

Data Source: Eurostat, DG for Energy and Transport



Unlike Railway density, there has been a continuous increase of motorway density in the EU-25 over the last years. The highest density is to be found in the Benelux countries and in Germany, whereas the more scarcely populated countries on the outskirts of the EU-25 have a lower density. To be noted is the increase in Portugal, Spain, Slovenia and Greece over the latest years. Iceland, Liechtenstein, Latvia and Malta have no motorways, while the density of the three Candidate Countries is very low.

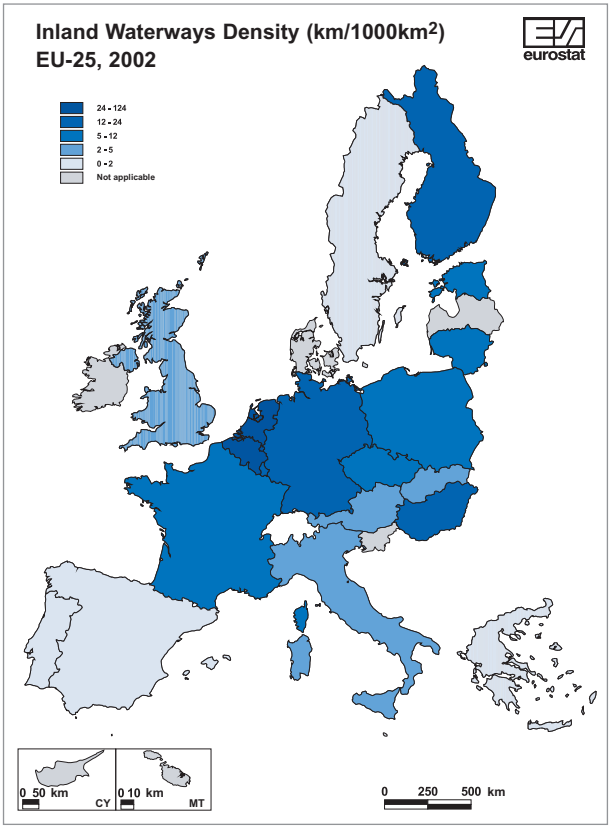
It is important to realise that a length-per-area indicator can not be used to compare the level of infrastructure development between different countries or regions. The reason is that population density and other factors must also be considered in such a comparison. For example, the same length of motorway in a more densely populated region serves more people than in a sparsely populated area.

Inland Waterways Density

Length(km)/surface (1000km²)

	1997	1998	1999	2000	2001	2002
EU-25	***9***	***9***	***9***	***9***	***9***	***9***
EU-15	***9***	***9***	***9***	***9***	***9***	***9***
Belgium	50	50	50	50	50	*50*
Czech Republic	9	8	8	8	8	8
Denmark	-	-	-	-	-	-
Germany	19	19	19	19	19	19
Estonia	7	7	7	7	7	7
Greece	0	*0*	*0*	*0*	*0*	*0*
Spain	*0*	*0*	*0*	*0*	*0*	*0*
France	11	10	10	11	10	10
Ireland	-	-	-	-	-	-
Italy	5	5	5	5	5	5
Cyprus	-	-	-	-	-	-
Latvia	-	-	-	-	-	-
Lithuania	6	6	6	6	7	7
Luxembourg	14	14	14	14	*14*	*14*
Hungary	15	15	15	15	16	15
Malta	-	-	-	-	-	-
Netherlands	*123*	*123*	*123*	*123*	*123*	*123*
Austria	4	4	4	4	4	4
Poland	12	12	12	12	12	12
Portugal	1	*1*	*1*	*1*	*1*	*1*
Slovenia	-	-	-	-	-	-
Slovakia	4	4	4	4	4	4
Finland	18	23	23	23	23	24
Sweden	1	*1*	*1*	*1*	*1*	*1*
United Kingdom	5	5	5	5	5	4
Iceland	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-
Norway	-	-	-	-	-	-
Switzerland	*18*	*18*	18	18	*18*	*18*
Bulgaria	4	4	4	4	4	4
Romania	7	7	7	7	7	7
Turkey	-	-	-	-	-	-

Data Source: Eurostat, DG for Energy and Transport



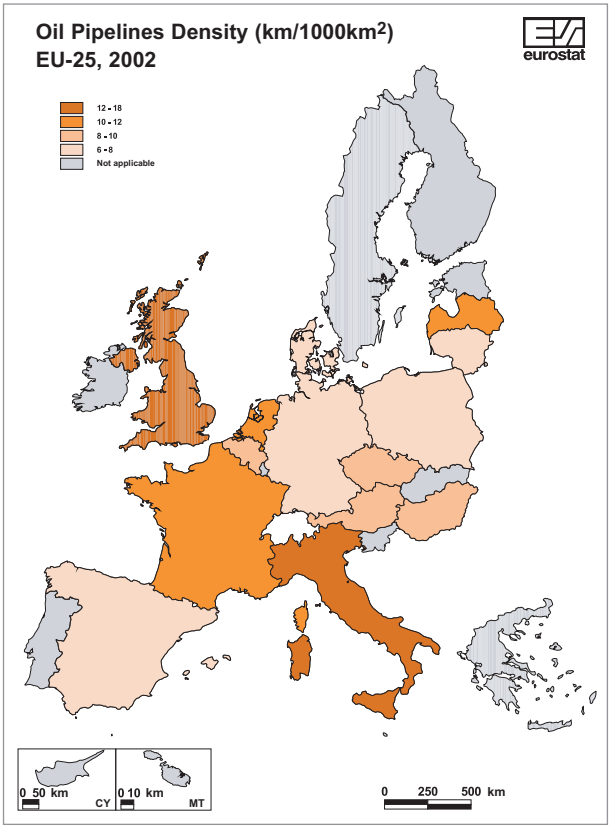
The inland waterways density in the EU-25 is constant over the period 1997-2002 but the network is very unbalanced across the EU-25 with some countries completely lacking inland waterways and, on the other hand, countries such as the Netherlands and Belgium with a very long waterway system. This leads to the exceptionally high density of 123 km/1000km^2 for the Netherlands, compared to the average within the EU-25 of 9 km/1000km^2. In terms of inland waterways' length, Finland held the first position with a network of 7 973 km in 2002, followed by Germany with 6 642 km; France was in the third position with a network of 5 637 km.

Oil Pipelines Density

Length(km)/surface (1000km²)

	1997	1998	1999	2000	2001	2002
EU-25	***7***	***7***	***7***	***7***	***7***	***7***
EU-15	***7***	***7***	***7***	***7***	***7***	***7***
Belgium	10	10	10	*10*	*10*	*10*
Czech Republic	9	9	9	9	9	9
Denmark	8	8	8	8	8	8
Germany	7	7	7	7	7	7
Estonia	-	-	-	-	-	-
Greece	-	-	-	-	-	-
Spain	7	7	7	7	7	*7*
France	10	10	10	10	10	10
Ireland	-	-	-	-	-	-
Italy	14	14	14	14	14	15
Cyprus	-	-	-	-	-	-
Latvia	12	12	12	12	12	12
Lithuania	6	6	8	8	8	8
Luxembourg	-	-	-	-	-	-
Hungary	9	9	9	9	9	*9*
Malta	-	-	-	-	-	-
Netherlands	*10*	*12*	*12*	*12*	*12*	*12*
Austria	9	9	9	9	9	9
Poland	7	7	7	7	7	7
Portugal	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-
Slovakia	-	-	-	-	-	-
Finland	-	-	-	-	-	-
Sweden	-	-	-	-	-	-
United Kingdom	16	16	16	16	18	18
Iceland	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-
Norway	14	18	21	24	25	*25*
Switzerland	3	3	3	3	3	3
Bulgaria	5	5	5	5	5	5
Romania	19	19	19	19	19	18
Turkey	3	3	3	3	3	3

Data Source: Eurostat, DG for Energy and Transport



The average density of oil pipelines for the EU-25 is constant at 7 km/1000km^2 throughout the reported period. In 2002, the United Kingdom has the highest density among the EU-25 countries (18 km/1000km^2) and Norway has the highest density in the EEA area with 25 km/1000km^2. Among the three Candidate Countries, Romania is in the first position with 18 km/1000km^2.

The total length of pipelines for the EU-25 in 2002 was approximately 27 650 km, with France (5 746 km) in the first position, followed by Italy (4 379 km) and United Kingdom (4 367 km).

Please note that data on oil pipelines only are collected and that oil pipelines between the land and drilling platforms at sea are included.

Number of Main Sea Ports

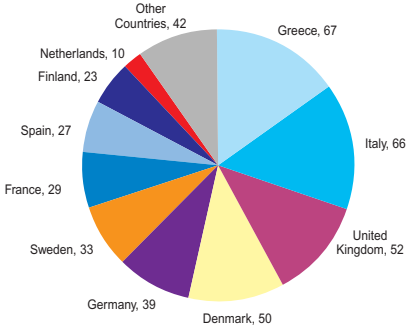
Ports handling more than 1 million tonnes per year
or with more than 200 000 passengers movements per year

	2000	2001	2002
EU-25	**405**	**422**	**438**
EU-15	**385**	**401**	**415**
Belgium	4	4	4
Czech Republic	-	-	-
Denmark	48	48	50
Germany	38	39	39
Estonia	5	5	5
Greece *	46	53	67
Spain	22	27	27
France	26	28	29
Ireland	10	9	8
Italy	64	67	66
Cyprus	2	2	3
Latvia	3	3	4
Lithuania	1	1	1
Luxembourg	-	-	-
Hungary	-	-	-
Malta	3	3	3
Netherlands	10	10	10
Austria	-	-	-
Poland	5	6	6
Portugal	8	8	7
Slovenia	1	1	1
Slovakia	-	-	-
Finland	20	24	23
Sweden	33	32	33
United Kingdom	56	52	52
Iceland	1	1	1
Liechtenstein	-	-	-
Norway	:	:	20
Switzerland	-	-	-
Bulgaria	2	2	2
Romania	2	2	3
Turkey	17	16	17

* increase of the number of ports due to extension of the ferry connections coverage

Data Source: Eurostat

Number of Main Sea Ports, 2002
EU-25 Top Ten Countries



In 2002 at EU-25 level there were 438 ports, each handling more than 1 million tonnes of freight or with more than 200 000 passengers' movements per year.

The largest number of ports is to be found in Greece, Italy, United Kingdom and Denmark.

Number of Main Commercial Airports

Commercial Airports with more than 150 000 passenger units movements per year*

	2001	2003
EU-25	**252**	**273**
EU-15	**235**	**255**
Belgium	4	4
Czech Republic	2	3
Denmark	7	7
Germany	24	26
Estonia	1	1
Greece	18	22
Spain	33	33
France	35	36
Ireland	5	5
Italy	28	33
Cyprus	2	2
Latvia	1	1
Lithuania	1	1
Luxembourg	1	1
Hungary	1	1
Malta	1	1
Netherlands	4	4
Austria	6	6
Poland	6	6
Portugal	8	8
Slovenia	1	1
Slovakia	1	1
Finland	10	11
Sweden	23	23
United Kingdom	29	36
Iceland	3	3
Liechtenstein	-	-
Norway	16	17
Switzerland	5	5
Bulgaria	3	3
Romania	3	2
Turkey	15	14

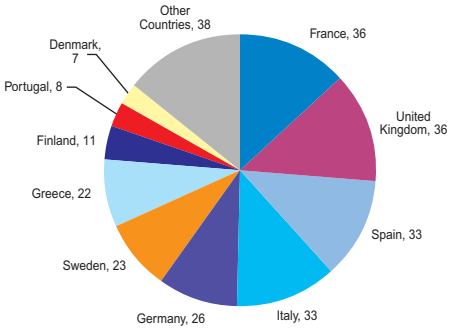
* One passenger unit is equivalent to either one passenger or 100 kg of freight and mail

Data Source: Eurostat

Number of Main Commercial Airports, 2003

EU-25 Top Ten Countries

eurostat



In 2003 at EU-25 level there were 273 commercial airports, each with more than 150 000 passenger units movements per year.

The largest number of main commercial airports is to be found in France, United Kingdom, Italy and Spain.

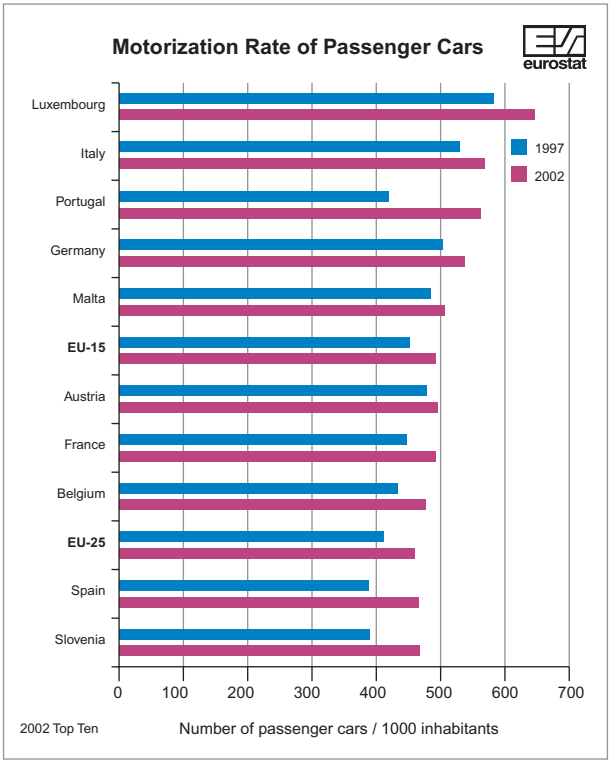
Motorization Rate of Passenger Cars

Number of passenger cars/1000 inhabitants

	1997	1998	1999	2000	2001	2002
EU-25	***412***	**422**	**432**	**444**	***455***	***463***
EU-15	***445***	**456**	**467**	**478**	***488***	***495***
Belgium	*432*	440	448	456	461	463
Czech Republic	329	339	334	335	345	357
Denmark	337	343	346	347	350	351
Germany	504	508	516	532	539	541
Estonia	306	325	333	339	299	295
Greece	232	247	269	293	312	331
Spain	389	407	425	437	451	*460*
France	448	459	469	476	485	490
Ireland	309	322	338	347	359	*371*
Italy	535	548	556	564	*579*	*590*
Cyprus	350	367	374	386	399	405
Latvia	177	200	220	235	249	265
Lithuania	247	276	309	335	326	340
Luxembourg	582	596	611	626	635	643
Hungary	223	216	220	232	244	259
Malta	490	463	480	490	497	*508*
Netherlands	380	390	401	411	418	424
Austria*	475	487	502	511	521	495
Poland	221	230	240	259	272	287
Portugal	424	453	485	514	538	558
Slovenia	392	410	428	437	444	459
Slovakia	211	222	229	236	240	247
Finland	379	392	403	412	417	422
Sweden	418	428	439	451	452	453
United Kingdom	397	403	414	420	*433*	*447*
Iceland	487	511	544	565	561	563
Liechtenstein	638	646	656	667	682	683
Norway	399	403	407	412	415	418
Switzerland	469	476	485	493	502	508
Bulgaria	208	219	232	247	264	276
Romania	116	125	133	139	146	136
Turkey	58	61	64	68	66	66

* break in the series in 2002

Data Source: Eurostat, DG for Energy and Transport



Note: There are still some problems of definitions applied differently, mainly on the distinction between a lorry and a passenger car (i.e. vans, pick-ups, etc.). Therefore one should be cautious when interpreting the figures.

The number of passenger cars per 1000 inhabitants has almost continuously increased from 1997 to 2002 in every EU-25 country. In 2002, Luxembourg had the highest rate in the EU-25 (643 cars per 1000 inhabitants), while the lowest can be found in Slovakia (247 cars per 1000 inhabitants).

Between 1997 and 2002 the highest increase in the number of cars per 1000 inhabitants was reported by Latvia (49%), Greece (43%) and Lithuania (38%). This is mainly believed to be associated with the general growth of the economy of these countries and the very low motorization rates in the past.

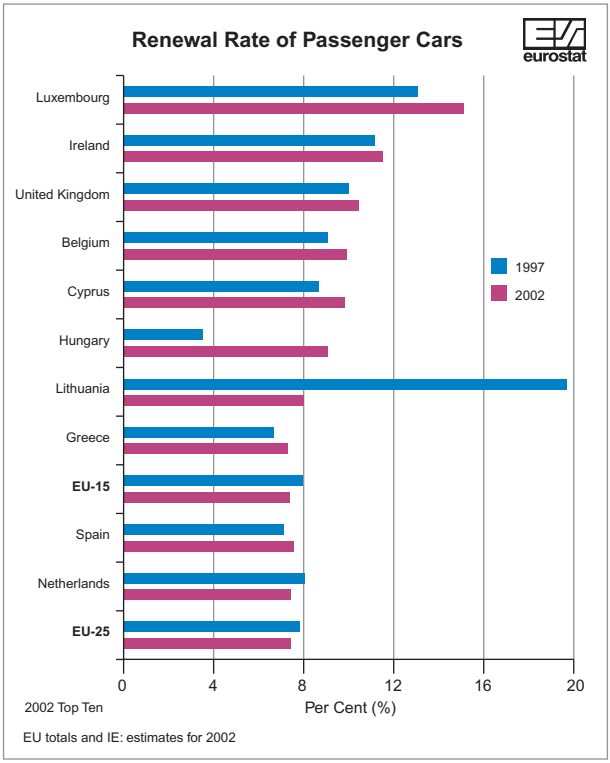
The average value for the EFTA countries was 476 passenger cars per 1000 inhabitants in 2002, which is very close to the EU-25 average of 463.

Renewal Rate of Passenger Cars

Passenger cars first registration/ total passenger cars (%)

	1997	1998	1999	2000	2001	2002
EU-25	***8.0***	***8.3***	***8.4***	***7.9***	***7.7***	**:**
EU-15	***8.0***	***8.4***	***8.6***	***8.2***	***8.0***	**:**
Belgium	9.1	10.3	11.0	11.4	10.5	9.9
Czech Republic	5.9	5.7	5.8	6.0	5.9	6.0
Denmark	8.6	9.0	7.8	6.1	5.1	5.9
Germany	8.5	9.0	9.0	7.7	7.5	7.3
Estonia	8.3	7.2	5.3	4.8	6.3	7.2
Greece	6.7	6.9	9.2	9.5	8.5	7.6
Spain	7.1	8.0	8.9	8.4	8.3	7.5
France	6.6	7.2	7.8	7.6	7.9	7.4
Ireland	11.1	11.6	13.4	17.1	11.6	:
Italy	7.8	7.7	7.2	7.2	7.2	6.6
Cyprus	8.6	10.0	7.8	7.1	8.8	9.8
Latvia	16.6	11.9	8.7	6.4	6.5	6.5
Lithuania	19.6	15.0	13.0	9.9	6.3	7.9
Luxembourg	13.0	14.4	15.6	15.5	15.4	15.2
Hungary	3.7	5.1	6.2	6.3	7.7	9.1
Malta	5.5	6.2	7.3	6.9	5.3	5.1
Netherlands	8.1	8.9	9.6	9.1	7.9	7.5
Austria	7.3	7.6	7.8	7.6	7.0	7.0
Poland	8.5	6.3	6.5	5.2	4.3	3.8
Portugal	6.7	7.1	7.1	6.5	5.5	4.6
Slovenia	8.2	8.7	9.6	7.5	6.3	5.7
Slovakia	7.5	6.4	4.7	4.3	5.2	5.1
Finland	5.4	6.3	6.6	6.3	5.1	5.4
Sweden	7.0	7.6	8.6	8.9	7.2	7.3
United Kingdom	10.0	10.3	9.8	9.7	10.3	10.4
Iceland	8.9	10.8	11.3	9.3	4.8	4.6
Liechtenstein	8.4	9.3	10.0	9.8	9.1	9.0
Norway	8.8	7.9	6.8	6.9	6.5	:
Switzerland	8.1	8.7	9.1	8.9	8.7	7.9
Bulgaria	1.6	3.9	5.4	4.9	5.6	5.6
Romania	8.9	7.7	5.3	4.8	3.0	:
Turkey	8.4	7.1	5.8	7.9	2.6	1.5

Data Source: Eurostat, DG for Energy and Transport, national statistics



Note: There are still some problems of definitions applied differently, mainly on the distinction between a lorry and a passenger car (i.e. vans, pick-ups etc.). Another problematic area is if the countries include only brand new vehicles in the first registrations or if they also include imported used vehicles. Therefore one should be cautious when interpreting the figures.

The average renewal rate in EU-25 was approximately 7.4% in 2002. The highest rate of 15.2% was reported by Luxembourg and the lowest of 3.8% by Poland.

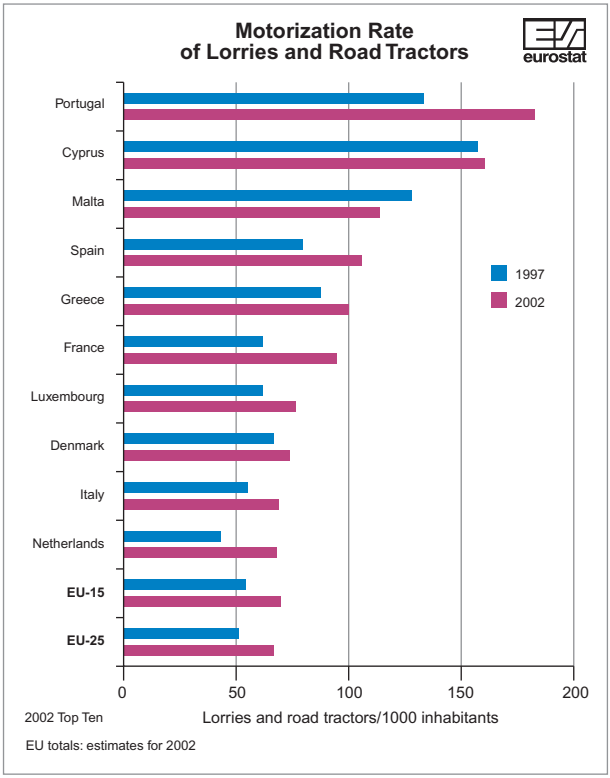
Motorization Rate of Lorries and Road Tractors

Lorries and road tractors/1000 inhabitants

	1997	1998	1999	2000	2001	2002
EU-25	***51***	***56***	***59***	***61***	***63***	**:**
EU-15	***54***	***60***	***62***	***65***	***67***	**:**
Belgium	*47*	49	51	53	56	57
Czech Republic	26	27	28	29	31	34
Denmark	65	67	70	72	73	75
Germany	30	31	32	34	34	34
Estonia	58	61	62	63	62	63
Greece	88	91	94	97	99	101
Spain	84	89	94	98	102	*104*
France	62	89	90	92	93	94
Ireland	*45*	*48*	*52*	*56*	*59*	*:*
Italy	55	57	58	60	*64*	*68*
Cyprus	158	161	162	165	168	166
Latvia	32	35	38	41	42	44
Lithuania	26	28	27	28	29	30
Luxembourg*	62	64	68	71	76	78
Hungary	33	33	34	36	37	39
Malta	*130*	*121*	*122*	118	117	*114*
Netherlands	45	49	53	56	59	61
Austria	40	41	42	43	44	42
Poland	39	40	44	49	51	56
Portugal	136	146	156	167	176	182
Slovenia	24	25	26	27	28	30
Slovakia	28	29	30	28	30	32
Finland	53	55	58	60	61	63
Sweden	37	39	41	43	45	47
United Kingdom	47	49	49	50	52	:
Iceland	59	60	64	69	70	71
Liechtenstein	*73*	*76*	*79*	*70*	*73*	:
Norway	36	36	36	*36*	*36*	:
Switzerland	37	38	38	39	39	40
Bulgaria	33	34	36	37	39	41
Romania	17	18	20	20	21	20
Turkey	15	16	17	19	19	19

* including light lorries

Data Source: Eurostat, DG for Energy and Transport, national statistics



Note: There are still some problems of definitions applied differently, mainly on the distinction between a lorry and a passenger car (i.e. vans, pick-ups etc.). Therefore one should be cautious when interpreting the figures.

In 2002, Portugal had the highest number of lorries and road tractors (182 per 1000 inhabitants) among the EU-25 countries, with Cyprus coming second (166 per 1000 inhabitants) and Malta third (114 per 1000 inhabitants). These high figures are partly explained by the fact that there is little or no rail network in the countries, so most of the inland transport of goods is done by road.

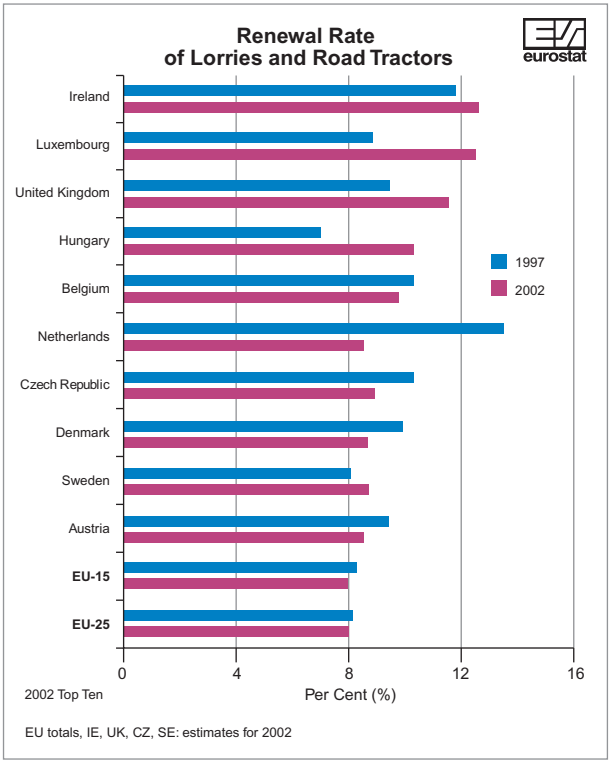
Renewal Rate of Lorries and Road Tractors

Lorries and road tractors first registration/ total lorries and road tractors(%)

	1997	1998	1999	2000	2001	2002
EU-25	***8.1***	***8.4***	***8.8***	***8.8***	***8.3***	**:**
EU-15	***8.3***	***8.5***	***8.9***	***8.9***	***8.5***	**:**
Belgium	*10.5*	12.2	13.2	12.0	12.2	9.9
Czech Republic	*10.0*	*9.6*	*9.1*	9.1	10.2	:
Denmark	10.1	9.6	10.0	9.4	9.1	8.8
Germany	9.5	10.4	10.9	9.9	9.0	8.3
Estonia	7.3	6.4	4.8	5.6	6.7	7.1
Greece	4.3	4.3	4.5	4.4	4.3	4.2
Spain	7.5	8.1	9.0	8.3	7.5	6.8
France	9.7	7.6	8.1	8.8	8.9	8.2
Ireland	*11.9*	*13.9*	*15.8*	*16.2*	*13.9*	:
Italy	5.5	6.2	6.2	7.0	6.8	7.8
Cyprus	5.9	6.8	6.1	6.0	6.8	6.2
Latvia	5.7	6.9	7.4	5.6	5.0	4.9
Lithuania	15.3	13.4	8.0	8.0	6.8	7.3
Luxembourg*	8.9	10.9	12.3	12.6	13.4	12.6
Hungary	7.1	8.9	9.5	9.3	9.0	10.5
Malta	*9.2*	*6.3*	*5.3*	4.7	4.1	3.0
Netherlands	13.7	14.9	13.8	12.6	10.6	9.6
Austria	9.5	10.1	10.2	10.4	9.1	8.6
Poland	5.8	7.3	8.8	7.9	5.7	7.5
Portugal	6.8	7.4	7.1	7.6	5.7	4.5
Slovenia	7.8	7.8	8.9	8.3	7.7	7.8
Slovakia	5.7	6.4	4.8	5.6	8.5	7.4
Finland	6.1	6.9	6.6	6.0	5.7	5.6
Sweden	8.1	9.3	10.0	10.5	9.2	:
United Kingdom	9.5	10.4	10.8	*11.6*	*11.9*	:
Iceland	8.1	9.3	10.4	11.2	6.2	4.9
Liechtenstein	8.1	9.1	9.6	9.6	*10.2*	:
Norway	3.6	4.4	3.4	*3.7*	*3.5*	:
Switzerland	7.4	8.1	8.5	9.6	10.0	8.3
Bulgaria	1.7	3.6	3.6	3.4	4.3	4.6
Romania	*6.4*	6.5	7.2	1.4	9.4	:
Turkey	12.5	11.6	7.0	9.8	3.6	3.8

* including light lorries. Special vehicles are included in the total of lorries and road tractors

Data Source: Eurostat, DG for Energy and Transport, national statistics



Note: There are still some problems of definitions applied differently, mainly on the distinction between a lorry and a passenger car (i.e. vans, pick-ups etc.). Another problematic area is if the countries include only brand new vehicles in the first registrations or if they also include imported used vehicles. Therefore one should be cautious when interpreting the figures.

The corresponding renewal rates for the countries with high numbers of lorries and road tractors per 1000 inhabitants were rather low: 4.5% for Portugal, 6.2% for Cyprus and 3.0% for Malta. On the other hand Luxembourg, Ireland, United Kingdom and Hungary all had a renewal rate of over 10%.

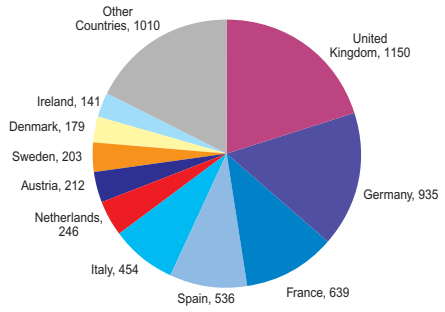
Airfleet by Operator Country

	4th quarter 2004
EU-25	**5 734**
EU-15	**5 287**
Belgium	145
Czech Republic	97
Denmark*	179
Germany	935
Estonia	24
Greece	98
Spain	536
France	639
Ireland	170
Italy	454
Cyprus	25
Latvia	36
Lithuania	35
Luxembourg	69
Hungary	57
Malta	19
Netherlands	246
Austria	212
Poland	98
Portugal	161
Slovenia	17
Slovakia	39
Finland	90
Sweden*	203
United Kingdom	1 150
Iceland	58
Liechtenstein	2
Norway*	181
Switzerland	251
Bulgaria	85
Romania	35
Turkey	217

* Includes those SAS passenger aircraft registered in Denmark and Sweden respectively, for which the operator country is 'multinational'

Data Source: Airclaims

Airfleet by Operator Country
at 4th quarter of 2004
EU-25 Top Ten Countries



Note: All military aircrafts excluded

At the end of the fourth quarter of 2004, there were 5734 commercial aircrafts in the EU-25.

Relatively small EU-25 countries weigh more in terms of number of commercial aircraft than in terms of population. For instance, Ireland, with a population of about 1% of the total EU-25 population, represents 3% of the airfleet in all EU-25 countries. In 2004, 13 countries with population less than 10 million inhabitants each represented 10% of total EU-25 population and 19% of total airfleet for the EU-25. Among the 6 most populated EU countries, only the United Kingdom has a higher share in terms of number of aircraft (20%) than in terms of population (13%).

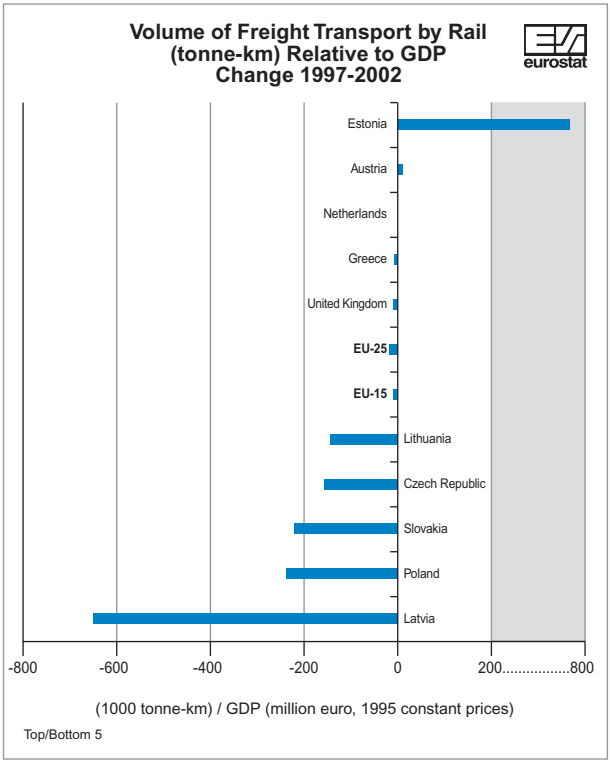
Volume of Freight Transport by Rail (tonne-km) Relative to GDP

(1000 tonne-km) / GDP (million euro, 1995 constant prices)

	1997	1998	1999	2000	2001	2002
EU-25	**53**	**50**	**47**	**48**	**45**	**45**
EU-15	**35**	**34**	**33**	**33**	**32**	**31**
Belgium	34	34	32	32	29	30
Czech Republic	481	433	382	385	362	334
Denmark*	14	14	13	13	13	12
Germany	38	38	36	38	37	37
Estonia	1 536	1 740	2 090	2 153	2 137	2 258
Greece	3	3	3	4	3	3
Spain	26	23	22	21	21	20
France	44	43	41	41	36	36
Ireland	9	7	7	6	6	5
Italy	26	25	24	25	24	22
Cyprus	-	-	-	-	-	-
Latvia	3 322	2 951	2 684	2 737	2 700	2 687
Lithuania	1 575	1 407	1 360	1 487	1 213	1 434
Luxembourg	40	38	37	35	32	28
Hungary	225	215	196	195	179	174
Malta	-	-	-	-	-	-
Netherlands	10	11	11	12	11	10
Austria	74	74	73	78	79	79
Poland	575	494	429	405	353	349
Portugal	25	22	23	22	21	22
Slovenia	171	166	153	151	146	155
Slovakia	751	685	566	632	593	538
Finland	90	86	82	81	78	75
Sweden	97	94	89	90	87	83
United Kingdom**	18	18	19	18	19	18
Iceland	-	-	-	-	-	-
Liechtenstein	:	:	:	:	:	:
Norway	24	23	22	22	21	19
Switzerland	35	35	37	35	*35*	:
Bulgaria	867	689	580	575	489	440
Romania	835	660	590	643	599	538
Turkey	64	54	56	62	51	46

* Rail transport data include transport on the network of DSB/Banestyrelsen
** Rail transport data refer to Great Britain

Data Source: Eurostat, UIC, national statistics



The average EU-25 volume of freight transport by rail (measured in tonne-kilometres) in relation to GDP gradually decreased in the period 1997-2002.

The picture of the 25 Member States is quite contrasted, having on one side the EU-15 countries with low values and on the other side the new Member States with high values. The average value of this index for the EU-25 in 2002 was 45 thousand tonne-km per million euro, which is much less than the high values that Latvia, Estonia, Lithuania and some other countries exhibited that year. This was due to both low Gross Domestic Product and high rail transport performance.

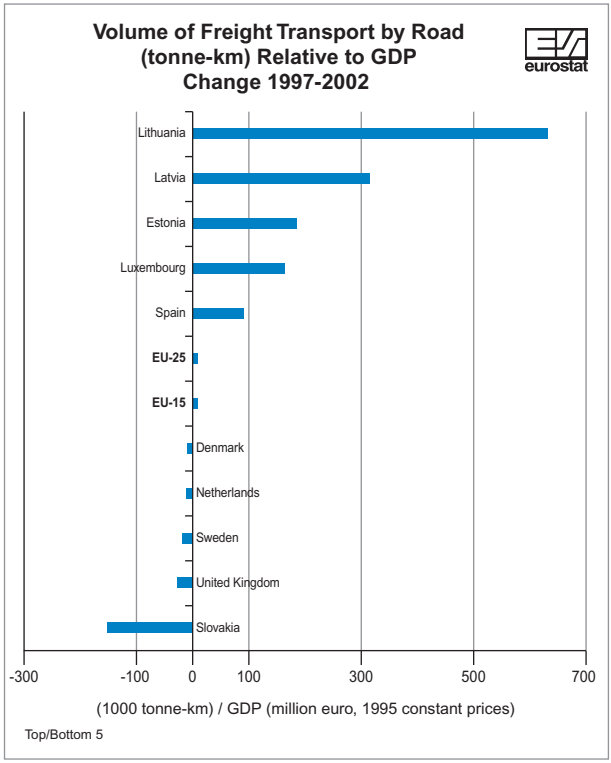
Volume of Freight Transport by Road (tonne-km) Relative to GDP

(1000 tonne-km) / GDP (million euro, 1995 constant prices)

	1997	1998	1999	2000	2001	2002
EU-25*	***184***	***188***	***190***	***189***	***190***	***193***
EU-15*	***169***	***173***	***174***	***174***	***174***	***176***
Belgium	197	*182*	160	211	218	215
Czech Republic	930	785	845	821	838	923
Denmark	148	*144*	152	153	139	140
Germany	128	131	139	137	139	137
Estonia	835	1 085	1 139	1 045	1168	1 022
Greece	190	*209*	*210*	*202*	:	:
Spain	*230*	*252*	259	275	290	325
France	148	149	157	150	149	146
Ireland	115	124	139	152	144	157
Italy	*201*	*210*	198	200	199	204
Cyprus	155	*153*	*148*	*146*	*145*	147
Latvia	797	933	915	985	1 020	1 103
Lithuania	940	956	1 341	1 295	1 297	1 572
Luxembourg	284	300	354	391	441	454
Hungary	*411*	493	471	460	429	422
Malta	:	:	:	:	:	:
Netherlands	208	222	227	209	203	199
Austria	149	153	166	166	176	178
Poland	541	564	549	546	552	546
Portugal	279	272	270	269	295	292
Slovenia	*234*	*221*	*231*	*281*	284	230
Slovakia	932	1 042	1 063	805	748	772
Finland	235	245	249	256	241	247
Sweden	*178*	*163*	*156*	160	152	160
United Kingdom	184	181	170	163	157	155
Iceland	88	86	89	89	89	91
Liechtenstein	:	:	:	:	:	:
Norway	112	115	114	112	109	110
Switzerland	67	70	69	*66*	*66*	:
Bulgaria	:	:	:	665	803	838
Romania	822	627	540	562	689	898
Turkey	938	990	1 031	1 027	1 041	961

* including estimations done for road freight transport for Malta and Greece

Data Source: Eurostat, DG for Energy and Transport, national statistics



During the reference period 1997 - 2002, road freight transport (measured in tonne-kilometres relative to GDP) increased in EU-25 by 4.9%. The average value of 193 thousand tonne-km per million euro in 2002 is more than four times higher than the corresponding value for rail transport. In 2002, Lithuania led with a value of 1 572 whereas the lowest value is exhibited by Germany (137) and Denmark (140). The highest percentage increase achieved in the reference period among the EU-25 countries is exhibited by Lithuania (67%) while the lowest (17% decrease) from Slovakia.

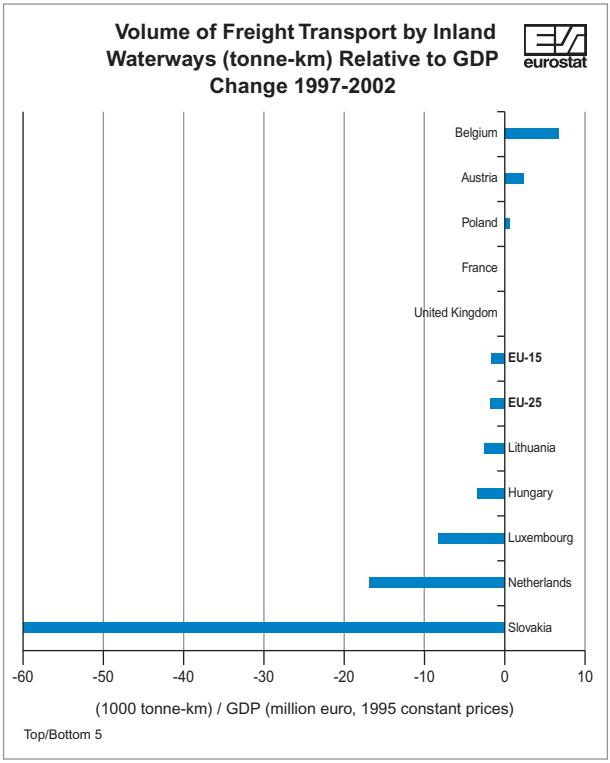
Volume of Freight Transport by Inland Waterways (tonne-km) Relative to GDP

(1000 tonne-km) / GDP (million euro, 1995 constant prices)

	1997	1998	1999	2000	2001	2002
EU-25	***17***	**17**	**17**	**17**	***16***	***16***
EU-15	**17**	**17**	**17**	**17**	***16***	***16***
Belgium	26	27	27	30	31	33
Czech Republic	2	2	2	2	2	2
Denmark	-	-	-	-	-	-
Germany	32	33	31	32	31	31
Estonia	0	0	1	0	-	-
Greece	-	-	-	-	-	-
Spain	-	-	-	-	-	-
France	6	6	6	7	6	6
Ireland	-	-	-	-	-	-
Italy	0	0	0	0	*0*	*0*
Cyprus	-	-	-	-	-	-
Latvia	-	-	-	-	-	-
Lithuania *	2	2	1	0	0	0
Luxembourg	23	22	20	19	19	14
Hungary *	*40*	41	24	21	29	37
Malta	-	-	-	-	-	-
Netherlands	121	115	112	108	108	105
Austria	11	11	11	12	12	13
Poland *	8	9	7	8	9	8
Portugal	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-
Slovakia *	92	76	95	78	55	31
Finland	1	1	1	1	1	1
Sweden	-	-	-	-	-	-
United Kingdom	0	0	0	0	0	0
Iceland	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-
Norway	-	-	-	-	-	-
Switzerland	0	0	0	0	*0*	:
Bulgaria *	70	63	20	33	42	53
Romania *	163	167	113	143	131	129
Turkey	-	-	-	-	-	-

* Inland waterways operators' data are reported for: LT, PL, SK, RO, HU (up to 1999), BG (up to 2000).

Data Source: Eurostat, DG for Energy and Transport, national statistics



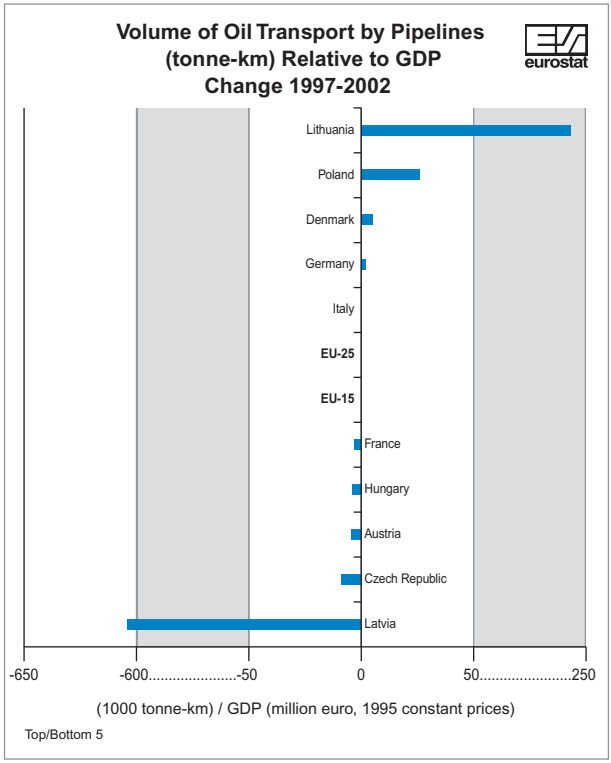
The volume of inland waterways transport measured in tonne-km in relation to GDP is rather low compared to the rail and road transport and is showing a decreasing trend. The Netherlands have the highest value for this index, which was to be expected since the country has the largest network of inland waterways in the EU-25; during 2002 the freight transported by inland waterways in Netherlands was almost a third of the total inland freight transport. In comparison, at the EU-25 level, the freight transported by inland waterways was 6% of the freight transported by the three inland transport modes (rail, road and inland waterways).

Volume of Oil Transport by Pipelines (tonne-km) Relative to GDP

(1000 tonne-km) / GDP (million euro, 1995 constant prices)

	1997	1998	1999	2000	2001	2002
EU-25	**15**	**16**	**15**	**15**	**16**	***15***
EU-15	**12**	**12**	**12**	**11**	**11**	***11***
Belgium	7	7	7	7	7	7
Czech Republic	48	48	41	35	36	36
Denmark	26	26	28	30	29	32
Germany	7	8	8	7	8	7
Estonia	-	-	-	-	-	-
Greece	-	-	-	-	-	-
Spain	14	14	14	14	14	14
France	18	17	16	16	15	15
Ireland	-	-	-	-	-	-
Italy	11	12	12	11	11	*11*
Cyprus	-	-	-	-	-	-
Latvia	1 513	1 492	1 331	1 330	1 433	907
Lithuania	485	505	455	576	749	718
Luxembourg	-	-	-	-	-	-
Hungary	50	51	46	42	47	*45*
Malta	-	-	-	-	-	-
Netherlands	18	17	16	15	15	15
Austria	42	41	37	36	38	37
Poland	127	150	151	153	156	153
Portugal	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-
Slovakia	-	-	-	-	-	-
Finland	-	-	-	-	-	-
Sweden	-	-	-	-	-	-
United Kingdom	12	12	12	11	11	10
Iceland	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-
Norway	33	32	30	26	27	26
Switzerland	1	1	1	1	1	1
Bulgaria	31	27	36	39	34	27
Romania	87	90	66	55	66	63
Turkey	141	258	297	263	233	157

Data Source: Eurostat, DG for Energy and Transport



The volume of oil transport measured in tonne-km in relation to GDP is constant over the period 1997-2002 and it is about 15 thousand tonne-km per million euro for the EU-25. Latvia (907) and Lithuania (718) show the largest values since there are important pipelines connecting the Russian oil deposits with the Baltic Sea ports.

Volume of Freight Inland Transport (tonne-km) Relative to GDP

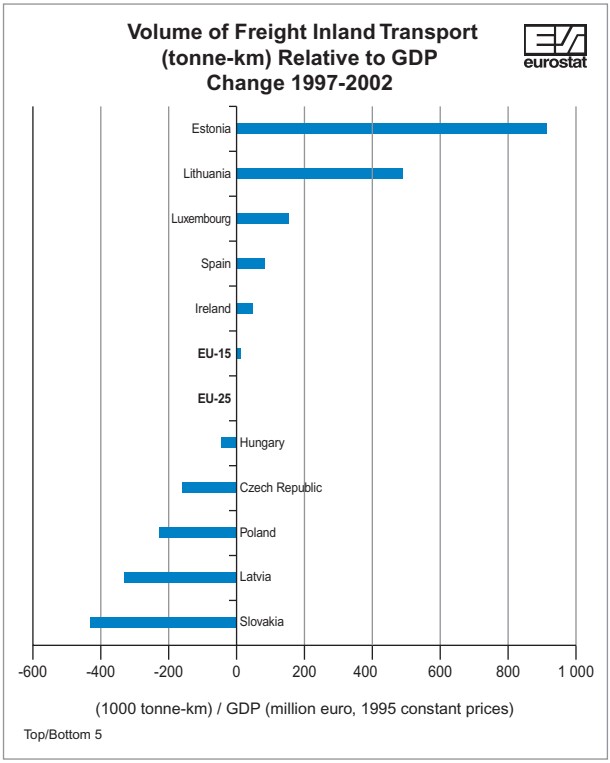
Total freight transport by Rail + Road + Inland Waterways (1000 tonne-km) / GDP (million euro, 1995 constant prices)

	1997	1998	1999	2000	2001	2002
EU-25*	***255***	***256***	***254***	***254***	***251***	***253***
EU-15*	***221***	***224***	***223***	***224***	***222***	***223***
Belgium	*257*	*242*	219	272	278	277
Czech Republic	1 413	1 220	1 229	1 208	1 201	1 259
Denmark	161	*157*	165	166	151	151
Germany	199	202	207	207	207	205
Estonia	2 371	2 825	3 229	3 198	3 305	3 280
Greece	194	*212*	*213*	*206*	:	:
Spain	*256*	*274*	281	297	311	345
France	198	198	204	198	192	188
Ireland	124	131	146	158	150	161
Italy	*227*	*235*	*222*	225	*222*	*226*
Cyprus	*155*	*153*	*148*	*146*	*145*	147
Latvia	4 119	3 884	3 599	3 722	3 720	3 790
Lithuania **	2 517	2 365	2 701	2 782	2 510	3 005
Luxembourg	347	*360*	411	446	492	496
Hungary **	676	749	691	677	637	633
Malta	:	:	:	:	:	:
Netherlands	339	347	350	329	322	314
Austria	234	238	250	256	267	271
Poland **	1 124	1 067	985	959	914	904
Portugal	304	294	293	291	316	313
Slovenia	*406*	*387*	*384*	*432*	430	385
Slovakia **	1 775	1 802	1 725	1 515	1 396	1 341
Finland	326	332	332	338	320	323
Sweden	*276*	*257*	*245*	250	239	243
United Kingdom	202	200	189	181	176	173
Iceland	88	86	89	89	89	91
Liechtenstein	:	:	:	:	:	:
Norway	136	137	136	134	130	129
Switzerland	102	105	106	*101*	*101*	:
Bulgaria **	:	:	:	1 273	1 335	1 331
Romania **	1 821	1 453	1 242	1 348	1 419	1 565
Turkey	1 002	1 045	1 087	1 090	1 093	1 007

* including estimations done for road freight transport for Malta and Greece

** Inland waterways operators' data are reported for: LT, PL, SK, RO, HU (up to 1999), BG (2000).

Data Source: Eurostat, DG for Energy and Transport, UIC, national statistics



When analysing this table it is important to note that total inland transport includes rail, road and inland waterways and excludes pipelines.

The total freight inland transport index for EU-25 remained almost unchanged during the reference period 1997-2002. Latvia, Estonia and Lithuania had the highest values in 2002. Luxembourg exhibited the highest percentage increase of 43% during the period 1997-2002 but in absolute terms Estonia is the country that recorded the greatest increase, and Slovakia, the one that experienced the highest decrease both in absolute and in relative terms.

Modal Split of Freight Transport
Share* of Road in Total Inland Transport (%)

Total transport of freight by road / Total transport of freight by inland (rail + road + inland waterways) (%)

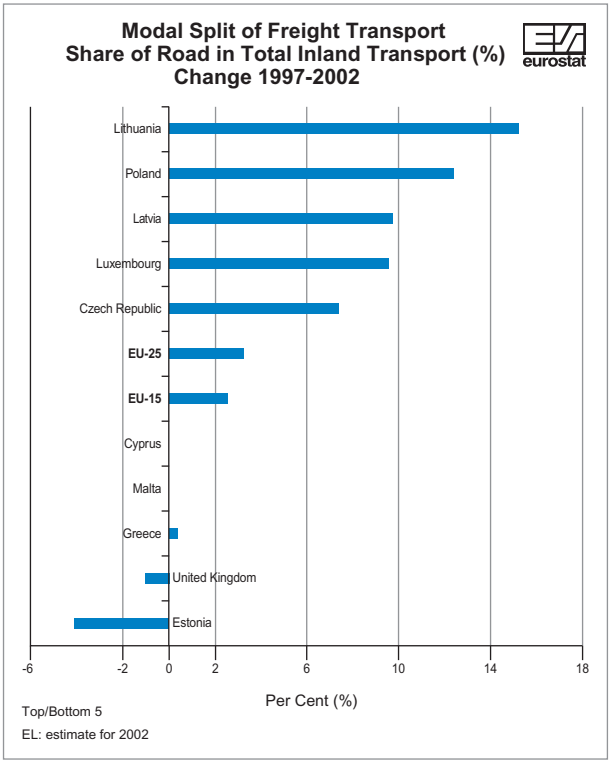
	1997	1998	1999	2000	2001	2002
EU-25**	***72.3***	***73.6***	***74.8***	***74.5***	***75.5***	***76.1***
EU-15**	***76.4***	***77.1***	***77.9***	***77.6***	***78.4***	***78.9***
Belgium	76.7	*75.1*	73.1	77.4	78.3	77.5
Czech Republic	65.8	64.3	68.8	68.0	69.7	73.3
Denmark	91.6	*91.2*	92.3	92.2	91.7	92.3
Germany	64.4	65.0	67.4	66.1	67.2	67.0
Estonia	35.2	38.4	35.3	32.7	35.3	31.1
Greece	98.2	*98.5*	*98.4*	*98.1*	:	:
Spain	*89.7*	*91.7*	92.1	92.8	93.2	94.1
France	74.9	75.3	76.8	76.0	77.9	77.8
Ireland	93.1	94.6	95.1	96.2	96.0	97.1
Italy	88.3	*89.1*	89.1	89.0	*89.4*	*90.4*
Cyprus	100.0	100.0	100.0	100.0	100.0	100.0
Latvia	19.4	24.0	25.4	26.5	27.4	29.1
Lithuania ***	37.4	40.4	49.6	46.6	51.7	52.3
Luxembourg	81.9	83.3	86.2	87.8	89.6	91.5
Hungary ***	60.8	65.8	68.2	68.1	67.3	66.7
Malta	100.0	100.0	100.0	100.0	100.0	100.0
Netherlands	61.4	63.8	64.8	63.4	63.0	63.3
Austria	63.7	*64.0*	66.3	64.8	65.9	65.9
Poland ***	48.1	52.9	55.7	56.9	60.4	60.5
Portugal	91.7	92.5	92.3	92.5	93.3	93.1
Slovenia	*57.8*	*57.1*	*60.1*	*65.0*	66.0	59.8
Slovakia ***	52.5	57.8	61.6	53.1	53.6	57.6
Finland	*72.1*	73.8	75.0	75.8	75.4	76.6
Sweden	*64.6*	*63.5*	*63.5*	63.9	63.6	65.9
United Kingdom	90.8	90.8	90.1	90.0	89.3	89.7
Iceland	100.0	100.0	100.0	100.0	100.0	100.0
Liechtenstein	:	:	:	:	:	:
Norway	82.4	83.6	83.7	83.5	84.0	85.1
Switzerland	65.6	66.6	64.6	*65.4*	*64.8*	:
Bulgaria ***	:	:	:	52.3	60.2	62.9
Romania ***	45.1	43.1	43.5	41.7	48.6	57.4
Turkey	93.6	94.8	94.8	94.3	95.3	95.5

* on the basis of tonne-km

** including estimations done for road freight transport for Malta and Greece

*** Inland waterways operators' data are reported for: LT, PL, SK, RO, HU (up to 1999), BG (2000).

Data Source: Eurostat, DG for Energy and Transport, UIC, national statistics



When analysing this table it is important to note again that total inland transport includes rail, road and inland waterways and excludes pipelines.

In 2002, on average 76% of freight inland transport in tonne-km for the EU-25 is performed by road. In most of the countries road transport is the dominant mode; exemptions are Estonia and Latvia where rail transport is ahead of road transport while in the case of Lithuania rail transport is just behind road transport. For half of the EU-25 countries the share of road transport in total inland transport is greater than 70%.

Tonnage of Freight Transport by Rail

(million tonnes)

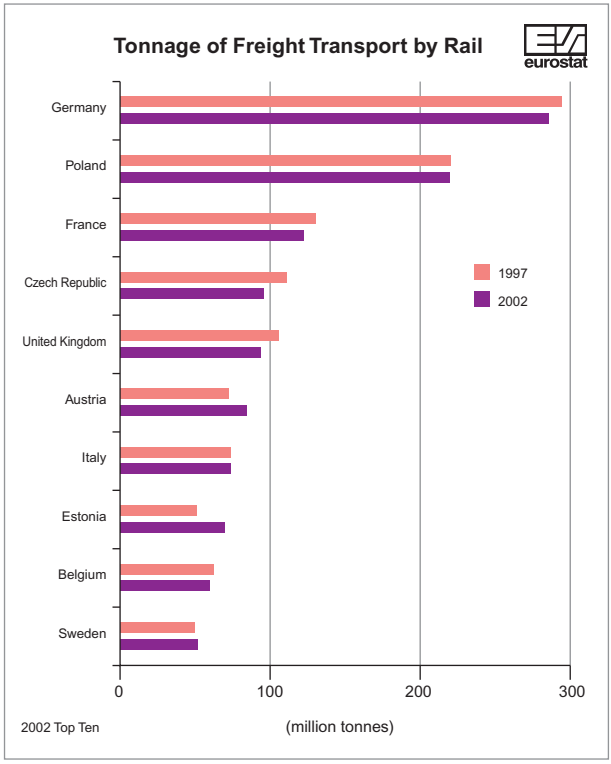
	1997	1998	1999	2000	2001	2002
EU-25*	***1 493***	***1 467***	***1 397***	***1 462***	**416**	**1 473**
EU-15*	***915***	***915***	***890***	***930***	**917**	**903**
Belgium	59	61	59	61	57	57
Czech Republic	111	105	91	98	97	92
Denmark	8	8	7	8	7	7
Germany	295	289	277	283	288	285
Estonia	49	53	58	64	65	71
Greece	2	2	2	3	3	2
Spain	25	26	25	26	26	26
France	135	137	137	142	126	128
Ireland	3	3	*3*	*3*	3	2
Italy	75	76	74	80	79	75
Cyprus	-	-	-	-	-	-
Latvia	41	38	33	36	38	40
Lithuania	30	31	28	31	29	37
Luxembourg	16	17	18	18	18	16
Hungary	51	53	49	50	36	43
Malta	-	-	-	-	-	-
Netherlands	23	*25*	*27*	*28*	26	26
Austria	71	73	74	81	83	84
Poland	222	203	185	185	167	223
Portugal	9	9	9	9	10	11
Slovenia	13	13	13	14	14	15
Slovakia	59	57	49	54	54	50
Finland	40	41	40	41	42	42
Sweden	*48*	48	*46*	52	55	55
United Kingdom	105	102	92	95	94	87
Iceland	-	-	-	-	-	-
Liechtenstein	:	:	:	:	:	:
Norway**	7	7	8	8	*8*	20
Switzerland	47	49	55	59	*59*	55
Bulgaria	29	24	21	21	19	19
Romania	93	76	63	71	72	68
Turkey	17	16	15	18	14	14

* The values of this table include national, international incoming, international outgoing and transit rail transport of each country. In consequence, some volumes are calculated twice or even three times. The estimated double counting is in order of the magnitude of 30%.

** break in series: two companies are included in 2002 figures.

Data Source: Eurostat, UIC, national statistics

eurostat



The tonnage of goods transported by rail in the 25 Member States did not change practically from 1997 to 2002, only 20 million tonnes less were transported at EU level in 2002.

In absolute terms, 285 million tonnes were transported in Germany in 2002, which corresponds to 19% of the total volume of the EU-25, and 223 million tonnes in Poland (15%).

In total, in Latvia, Estonia and Lithuania - the countries that showed by far the highest values of freight transport by rail measured in tonne-kilometres in relation to GDP - only 148 million tonnes were transported in 2002, representing 10% of EU-25.

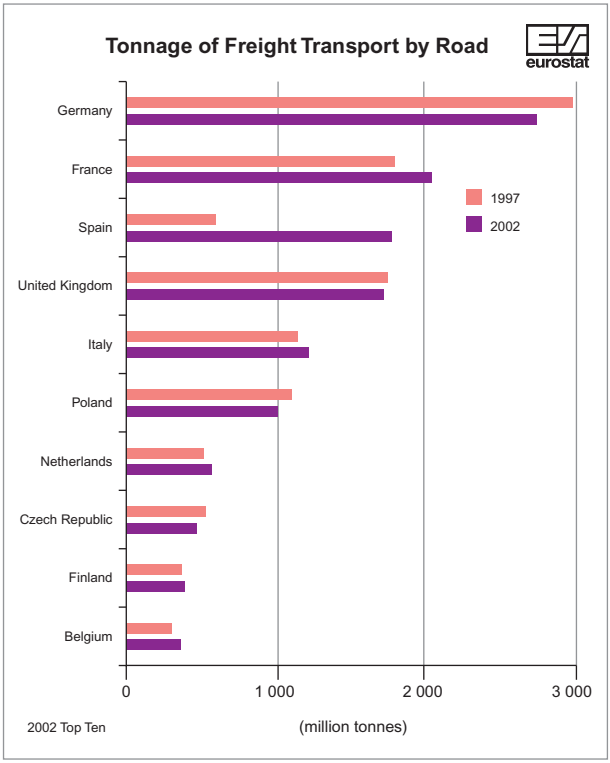
Tonnage of Freight Transport by Road

(million tonnes)

	1997	1998	1999	2000	2001	2002
EU-25	:	:	:	:	:	:
EU-15	***10 799***	***10 918***	***11 423***	***11 687***	***11 626***	:
Belgium	307	345	323	412	386	392
Czech Republic	521	471	448	394	439	475
Denmark	201	204	216	224	205	209
Germany	2 981	2 968	3 181	3 003	2 885	2 721
Estonia	13	13	14	26	33	33
Greece	204	*187*	*194*	*198*	*203*	:
Spain*	628	718	827	945	1 048	1 761
France	1 770	1 788	1 897	1 924	1 991	2 037
Ireland	*127*	*136*	162	192	201	223
Italy	1 153	*1 100*	1 082	1 205	1 160	1 254
Cyprus	:	:	:	:	:	52
Latvia	25	34	33	33	32	39
Lithuania	59	55	46	45	45	45
Luxembourg	24	*25*	33	37	45	51
Hungary	268	258	263	261	246	228
Malta	:	:	:	:	:	:
Netherlands	486	500	608	585	593	570
Austria	258	260	273	277	284	286
Poland	1 111	1 077	1 068	1 083	1 072	1 002
Portugal	262	272	281	287	304	283
Slovenia	52	47	47	49	50	44
Slovakia	212	186	151	197	196	174
Finland	389	406	416	422	379	420
Sweden	299	313	306	329	311	326
United Kingdom	1 709	1 696	1 624	1 648	1 630	1 691
Iceland	:	:	:	:	:	:
Liechtenstein	:	:	:	:	:	:
Norway	222	225	226	222	219	216
Switzerland	:	:	:	:	:	:
Bulgaria	144	:	:	122	115	140
Romania	246	314	279	263	268	267
Turkey	:	:	:	:	:	:

* break in 2002: national transport includes goods transported inside the towns.

Data Source: Eurostat



Note: In 1999, there may be a break in the series for some Member States due to beginning of data collection according to the Council Regulation (EC) 1172/98. Cross-trade and cabotage data are included since 1999 (For Sweden, since 2000)

Although not recorded in the table, road freight transport of the EU-25 accounted for approximately 14.5 billion tonnes in 2002 and it has increased by 11% since 1997. Among the EU-25 countries, the German hauliers were in the first position with a share of 19%, while the French hauliers were in the second with 14%.

Latvia, Estonia and Lithuania which displayed the highest values of freight transport by road (in tonne-kilometres) relative to GDP, had altogether a share of 0.8% of the tonnes transported by road at the EU level in 2002.

Tonnage of Freight Transport by Inland Waterways

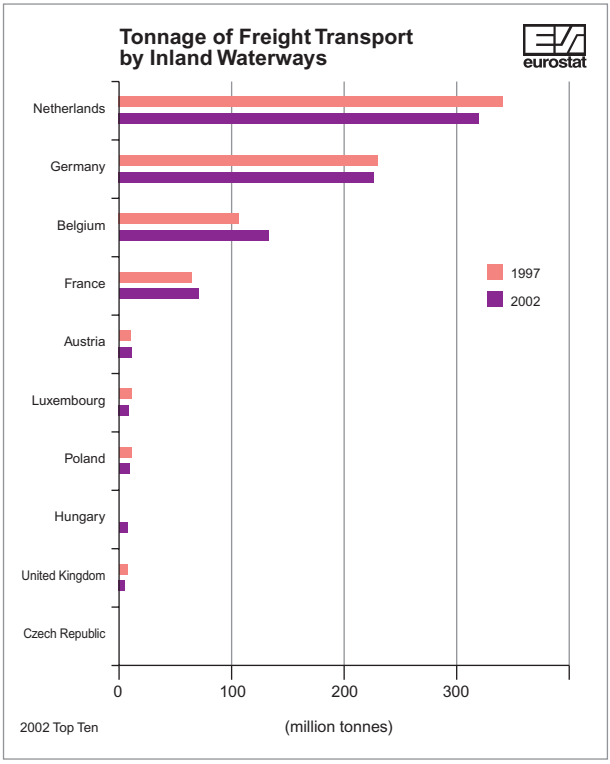
(million tonnes)

	1997	1998	1999	2000	2001	2002
EU-25 *	**:**	**:**	**:**	**792**	**808**	**788**
EU-15 *	**741**	**746**	**741**	**774**	**789**	**770**
Belgium	106	106	110	120	128	134
Czech Republic	2	2	2	2	2	2
Denmark	-	-	-	-	-	-
Germany	233	236	229	242	236	232
Estonia	:	:	:	:	-	-
Greece	-	-	-	-	-	-
Spain	-	-	-	-	-	-
France	58	62	66	71	68	67
Ireland	-	-	-	-	-	-
Italy	:	:	:	:	:	:
Cyprus	-	-	-	-	-	-
Latvia	-	-	-	-	-	-
Lithuania **	0	0	0	0	0	-
Luxembourg	10	11	11	12	11	9
Hungary	:	:	:	4	6	7
Malta	-	-	-	-	-	-
Netherlands	319	316	311	314	329	312
Austria	9	10	10	11	12	12
Poland **	9	9	8	10	10	8
Portugal	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-
Slovakia **	1	1	2	2	2	1
Finland	0	0	0	1	0	0
Sweden	-	-	-	-	-	-
United Kingdom	5	4	4	4	4	4
Iceland	-	-	-	-	-	-
Liechtenstein	-	-	-	-	-	-
Norway	-	-	-	-	-	-
Switzerland	:	:	:	:	:	:
Bulgaria	:	:	:	:	6	6
Romania **	16	15	14	13	11	14
Turkey	-	-	-	-	-	-

* EU totals exclude Italy and Estonia

** Inland waterways operators data are reported for: LT, PL, SK, RO

Data Source: Eurostat



Freight transport by inland waterways in the EU-25 accounted for approximately 4.7% of total inland transport tonnage (excluding pipelines) in 2002, while transport by road and rail represented 86.5% and 8.8% respectively.

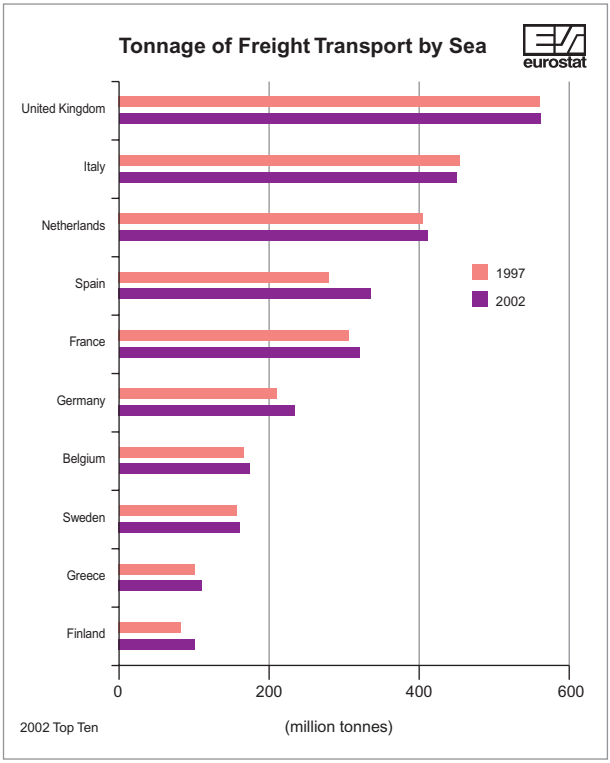
Between the year 1997 and 2002 the total volume of this mode of transport in the European Union was approximately 800 million tonnes. Netherlands and Germany are the two main countries contributing to this value. In 2002, they accounted for 69% of goods carried by inland waterways in the EU-25. Belgium, which in 2002 was in the third place with a share of 17%, recorded the most significant increase in the period 1997-2002.

Tonnage of Freight Transport by Sea

(million tonnes)

	1997	1998	1999	2000	2001	2002
EU-25	**3 071**	**3 147**	**3 135**	**3 167**	**3 215**	**:**
EU-15	**2 912**	**2 982**	**2 967**	**2 985**	**3 028**	**3 054**
Belgium	162	171	166	179	174	174
Czech Republic	-	-	-	-	-	-
Denmark	124	105	97	97	94	94
Germany	213	217	222	243	246	246
Estonia	23	27	34	40	40	45
Greece	101	111	113	128	113	111
Spain	271	280	296	235	315	326
France	305	319	315	337	318	319
Ireland	36	40	43	45	46	45
Italy	459	476	463	447	445	458
Cyprus	7	6	6	7	7	7
Latvia	51	52	49	52	57	52
Lithuania	16	15	16	23	21	24
Luxembourg	-	-	-	-	-	-
Hungary	-	-	-	-	-	-
Malta	3	4	4	4	7	:
Netherlands	402	405	396	406	406	413
Austria	-	-	-	-	-	-
Poland	51	51	50	48	46	48
Portugal	55	58	59	56	56	56
Slovenia	7	8	8	9	9	9
Slovakia	-	-	-	-	-	-
Finland	75	77	77	81	96	99
Sweden	150	156	156	159	153	155
United Kingdom	558	568	565	573	566	558
Iceland	:	5	5	:	5	:
Liechtenstein	-	-	-	-	-	-
Norway	:	:	:	:	:	190
Switzerland	-	-	-	-	-	-
Bulgaria	:	:	:	:	20	20
Romania	32	28	23	25	28	33
Turkey	138	143	135	141	128	:

Data Source: Eurostat



Note: Caution must be observed when considering the total figures (inwards + outwards), as the national transport includes some double-counting (goods loaded and unloaded).

Having in mind the note above, more than 3 200 million tonnes were handled in the EU-25 in 2002. Around two thirds of this tonnage were goods unloaded and the remaining third goods loaded. Overall the volume of goods handled increased by 5.7% since 1997.

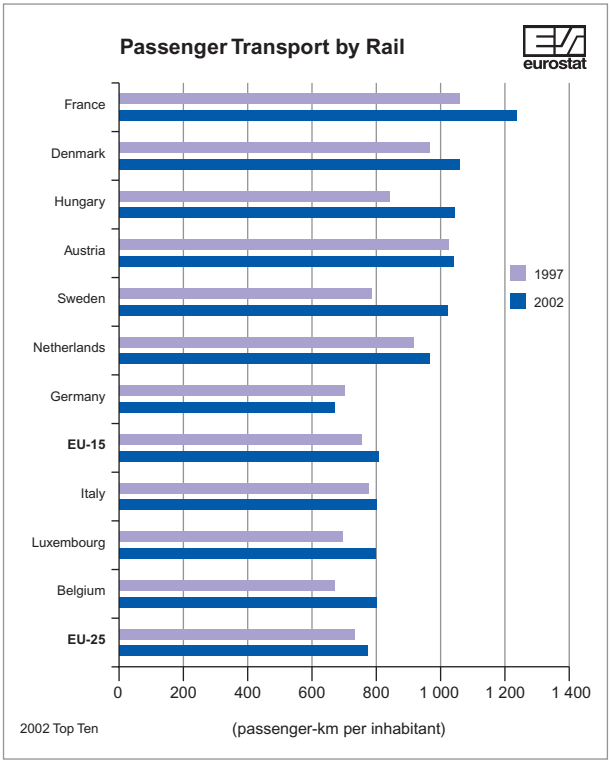
Passenger Transport by Rail

(passenger-km per inhabitant)

	1997	1998	1999	2000	2001	2002
EU-25	**722**	**730**	**750**	**777**	***781***	***773***
EU-15	**754**	**763**	**784**	**808**	***817***	***812***
Belgium	686	696	719	754	781	799
Czech Republic	749	682	676	711	713	646
Denmark	979	1011	998	1 037	1 068	1 069
Germany	883	886	899	917	920	865
Estonia	187	170	173	192	133	130
Greece	175	143	145	173	*159*	*167*
Spain	421	443	458	465	477	*478*
France	1 058	1 099	1 131	1 181	1 203	1 231
Ireland	378	383	388	365	392	414
Italy	758	719	753	816	*814*	*804*
Cyprus	-	-	-	-	-	-
Latvia	474	439	412	301	300	318
Lithuania	236	225	211	175	153	144
Luxembourg	703	706	720	761	783	800
Hungary	842	865	929	949	982	1 037
Malta	-	-	-	-	-	-
Netherlands*	910	949	949	967	966	960
Austria	1 022	999	1 001	1 024	1 026	1 031
Poland	516	532	557	623	582	540
Portugal	452	454	425	355	359	355
Slovenia	310	325	314	411	359	376
Slovakia	568	574	550	533	521	499
Finland	657	655	661	658	633	638
Sweden	796	817	872	936	989	1020
United Kingdom	592	616	650	643	*660*	*674*
Iceland	-	-	-	-	-	-
Liechtenstein**	:	:	:	:	:	:
Norway	571	587	652	636	612	549
Switzerland	1 747	1 756	1 766	1 787	1 *867*	1 661
Bulgaria	708	574	465	431	378	330
Romania	700	596	548	518	495	390
Turkey	94	98	96	90	81	75

* Rail data are based on the movements of the Dutch inhabitants on Dutch territory
** Rail transport data are included in Austrian data

Data Source: Eurostat, DG for Energy and Transport, national statistics



Note: Rail passenger data are not harmonised at EU level. Transit transport is included for some countries.

The passenger transport by rail, in terms of passenger-kilometres per inhabitant, increased on average by 7% in EU-25 between 1997 and 2002. In absolute figures, it is France which in 2002 recorded the largest number of passenger-kilometres per inhabitant; Denmark was in second place and Hungary third. Germany and Poland, holders of the first two places in the freight transport by rail in 2002, were respectively in the seventh and the fourteenth position in passenger transport the same year.

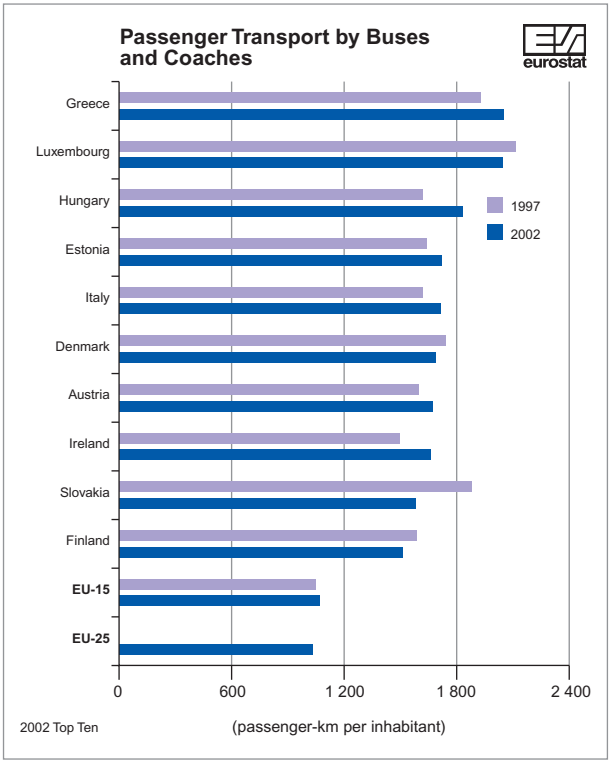
Passenger Transport by Buses and Coaches

(passenger-km per inhabitant)

	1997	1998	1999	2000	2001	2002
EU-25	:	:	:	***1 080***	***1 084***	***1 070***
EU-15	***1 056***	***1 073***	***1 078***	***1 086***	***1 092***	***1 082***
Belgium	1 304	1 336	*1 349*	1 287	1 309	1 320
Czech Republic	854	843	841	910	1 036	947
Denmark	1 738	1 717	1 715	1 710	1 685	1 669
Germany	929	923	928	941	935	917
Estonia	1 599	1 634	1 616	1 920	1 804	1 715
Greece	1 920	1 957	1 976	1 988	*2 009*	*2 031*
Spain	1 117	1 252	1 262	1 260	1 284	1 228
France	722	726	710	730	698	677
Ireland	1 497	*1 535*	*1 571*	*1 607*	*1 620*	*1 615*
Italy	1 565	1 573	1 605	1 627	*1 668*	*1 706*
Cyprus	:	:	:	821	*812*	*802*
Latvia	707	790	991	989	979	1 010
Lithuania	893	835	756	616	609	590
Luxembourg	*2 146*	*2 119*	*2 091*	*2 063*	*2 037*	*2 017*
Hungary	1 616	1 673	1 738	1 834	1 827	1 840
Malta	:	:	:	*259*	*254*	*253*
Netherlands	512	497	474	471	474	446
Austria	*1 569*	*1 592*	*1 614*	*1 635*	*1 649*	*1 664*
Poland	857	880	860	821	802	762
Portugal	1 150	1 140	1 128	1 156	1 088	955
Slovenia	1 509	1 444	1 356	1 124	1 005	835
Slovakia	1 852	1 640	1 452	1 565	1 534	1 531
Finland	1 556	1 514	1 471	1 488	1 484	1 481
Sweden	1 006	1 028	1 050	1 048	1 079	1 132
United Kingdom*	749	760	756	753	*773*	*777*
Iceland	*1 597*	*1 671*	*1 687*	1 693	*1 681*	*1 683*
Liechtenstein	:	:	:	:	:	:
Norway	964	950	936	922	909	909
Switzerland	434	432	429	426	426	:
Bulgaria	1 427	1 546	1 795	1 810	1 892	2 158
Romania	600	398	370	343	320	242
Turkey	1 538	1 508	1 429	1 348	1 118	1 154

* buses and coaches data refer to Great Britain

Data Source: Eurostat, DG for Energy and Transport, national statistics



Note: Buses and coaches data are asked to be based on movements on national territory, regardless of the nationality of the vehicle. However, data collection methodology is not harmonised at the EU level.

In terms of passenger-kilometres per capita, Greece, Luxembourg and Hungary are the countries that lead the ranking of 2002 in the EU-25 while Lithuania, Netherlands and Malta are the last. On the other hand, in terms of passenger-kilometres, Italy is in the first place with 97.5 billion passenger-kilometres followed by Germany (75.7 billion pkm) and Spain (50.1 billion pkm).

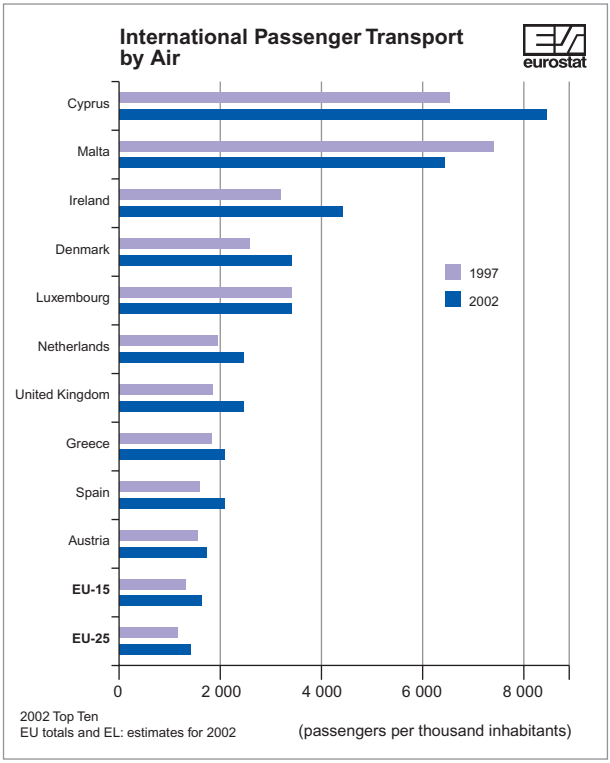
International Passenger Transport by Air

(passengers per thousand inhabitants)

	1997	1998	1999	2000	2001	2002
EU-25 [1]	**1 116**	**1 204**	**1 298**	**1 398**	**:**	**:**
EU-15	**1 283**	**1 382**	**1 491**	**1 603**	**:**	**:**
Belgium	1 564	1 811	1 956	2 106	1 923	1 385
Czech Republic [2]	438	456	480	554	610	632
Denmark	2 632	2 850	3 019	3 204	3 358	3 394
Germany	996	1 038	1 120	1 199	1 181	1 139
Estonia [2]	355	401	398	408	417	434
Greece	1 857	1 819	2 060	2 253	:	:
Spain	1 580	1 743	1 922	2 031	2 068	*2 042*
France	895	961	1 029	1 113	1 112	1 153
Ireland	3 247	3 574	3 909	4 217	4 310	4 470
Italy	585	609	676	767	*756*	*747*
Cyprus [6]	6 824	7 369	7 959	8 687	9 144	8 499
Latvia [2]	219	231	236	243	265	271
Lithuania	134	148	154	166	187	202
Luxembourg	3 393	3 501	3 656	3 795	3 664	3 374
Hungary	352	384	422	460	451	440
Malta	7 337	7 616	7 869	7 789	7 139	6 547
Netherlands	2 027	2 206	2 357	2 538	2 456	2 516
Austria	1 478	1 596	1 661	1 775	1 761	1 790
Poland	87	104	112	122	129	132
Portugal	1 018	1 144	1 219	1 310	1 294	1 394
Slovenia	366	407	462	509	455	444
Slovakia [4]	29	39	29	27	35	86
Finland	1 253	1 356	1 344	1 468	1 485	1 448
Sweden	1 442	1 559	1 716	1 836	1 818	1 635
United Kingdom	1 935	2 118	2 243	2 390	*2 391*	*2 467*
Iceland	2 881	3 137	3 451	3 827	3 611	3 405
Liechtenstein	-	-	-	-	-	-
Norway	*1 608*	*1 611*	1 662	1 832	1 857	1 725
Switzerland	3 425	3 628	3 990	4 364	4 080	3 342
Bulgaria [3]	272	277	260	260	323	380
Romania	70	75	80	92	113	103
Turkey [5]	355	333	267	334	343	357

1) Passengers travelling between 2 countries are counted twice in the aggregate EU-25
2) CZ, EE, LV: up to 2001, air passenger data include transit
3) BG: up to 2001, only public sector enterprises. Including transit for 1995-1999
4) SK: up to 2001, data consist only of transport enterprises enrolled in Bussiness Register with 20 and more employees
5) TR: up to 2001, number of departures and arrivals in external lines reported to the General Directorate of State Airports
6) CY: Excluding transfer passengers

Data Source: Eurostat, national statistics



Note: In principle, data on air passengers used for the calculation of this indicator, are based on On Flight Origin/Destination information rather than Flight Stage. Flight Stage data were used when no On Flight Origin/Destination data were available and in these cases direct transit passengers were included.

Aviation is by far the fastest growing mode of transport for passengers in EU with, between 1997 and 2000, an average annual increase of about 8% for international passengers.

In 2002 the highest number of international trips per capita in EU-25 was registered in Cyprus (8.5 trips per capita) and the lowest in Slovakia (0.09 trips per capita). The very low figure of the latter can probably be explained on one hand by the proximity of the capital city (Bratislava) with the capital city of Austria and Vienna's international airport and on the other hand by the relative youth of Bratislava as a capital city (since the independence of Slovakia in 1993).

Passenger Transport by Sea

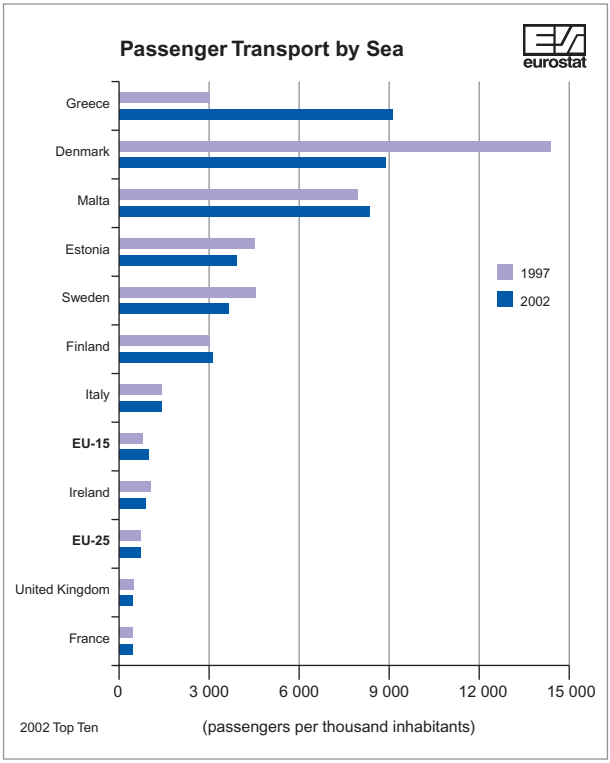
(passengers per thousand inhabitants)

	1997	1998	1999	2000	2001	2002
EU-25	***845***	***829***	***829***	***776***	***814***	***921***
EU-15	***983***	***960***	***956***	***886***	***938***	***1 070***
Belgium	191	166	152	148	134	109
Czech Republic	-	-	-	-	-	-
Denmark	14 367	11 962	10 775	9 707	8 931	8 962
Germany	378	378	378	382	386	403
Estonia	4 383	4 875	5 338	5 427	4 208	3 780
Greece*	*2 993*	*3 264*	*3 416*	2 553	*4 574*	*9 196*
Spain	354	389	409	365	462	*465*
France	569	528	519	473	468	489
Ireland	1 192	1 261	1 160	1 110	1 008	990
Italy	1 394	1 400	1 482	1 495	*1 513*	*1 447*
Cyprus**	1 067	1 085	1 200	1 491	1 025	477
Latvia**	25	42	31	32	11	10
Lithuania	20	21	22	30	29	31
Luxembourg	-	-	-	-	-	-
Hungary	-	-	-	-	-	-
Malta	7 718	7 729	8 256	8 198	8 310	*8 334*
Netherlands	126	117	123	126	127	136
Austria	-	-	-	-	-	-
Poland	56	60	81	116	114	86
Portugal	*47*	47	46	52	53	48
Slovenia	22	21	19	19	17	21
Slovakia	-	-	-	-	-	-
Finland	2 955	3 102	3 126	3 084	3 225	3 188
Sweden	4 629	4 717	4 693	4 122	3 636	3 598
United Kingdom	615	623	602	567	*580*	*601*
Iceland	:	:	:	:	:	:
Liechtenstein	-	-	-	-	-	-
Norway	*1 345*	*1 444*	*1 466*	*1 461*	*1 434*	1 339
Switzerland	-	-	-	-	-	-
Bulgaria	:	:	:	:	0	1
Romania	:	:	:	:	0	0
Turkey	33	29	17	20	19	:

* Greece: until 2000, not all ferry connections were reported.

** Break in the series: Data cover cruise passengers started/ended their journey, excluding passengers on excursions. CY (2002), LV (since 2001)

Data Source: Eurostat



Note: Caution should be observed when interpreting the figures since they take into account passengers having made national, international intra-EU and extra-EU journeys. Thus passengers in national and international intra-EU traffic are double counted, once at embarkation and once at disembarkation.

Sea transport of passengers per thousand inhabitants reduced by 8% in the EU-25 over the period 1997-2000 but there was a sharp increase in 2001 and 2002 mainly attributed to the effect of additional ferry connections reported by Greece.
In 2002, Greece was in the first position with 9.2 passengers per capita and with more than 100 million passengers. Denmark was next in terms of travel intensity with 9.0 passengers per capita but Italy was second in terms of number of passengers – 82.7 million.

Number of Persons Killed in Road Accidents

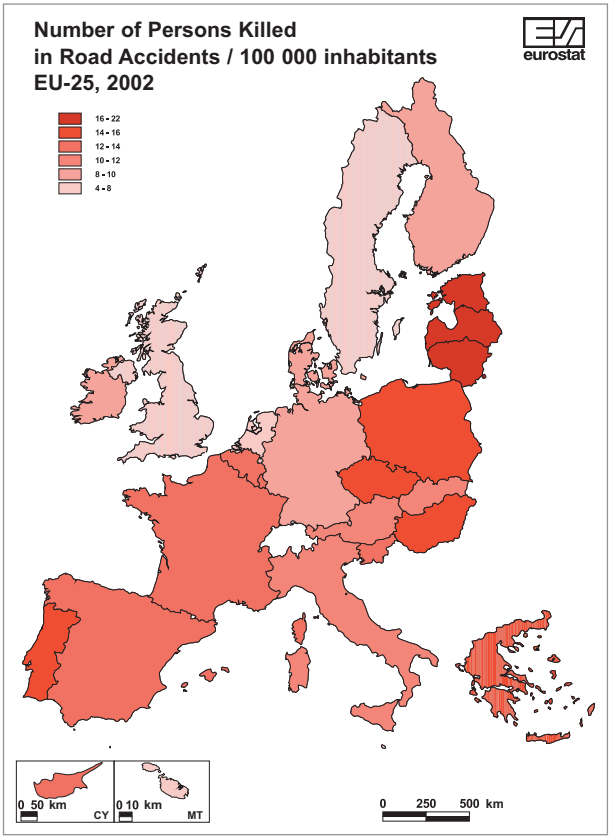
Persons killed in road accidents / 100 000 inhabitants

	1997	1998	1999	2000	2001	2002
EU-25	**13**	**12**	**12**	**12**	***11***	***11***
EU-15	**12**	**11**	**11**	**11**	**11**	**10**
Belgium	13	15	14	14	14	13
Czech Republic	15	13	14	14	13	14
Denmark	9	9	10	9	8	9
Germany	10	9	9	9	8	8
Estonia	20	20	17	15	15	16
Greece	20	20	19	19	*17*	*15*
Spain *	14	15	14	14	14	*13*
France *	15	15	14	14	14	13
Ireland	13	12	11	11	11	10
Italy *	12	11	12	11	*12*	*12*
Cyprus	17	16	16	16	14	13
Latvia **	22	26	25	25	22	22
Lithuania	20	23	21	18	20	20
Luxembourg	14	13	13	17	16	14
Hungary	14	13	13	12	12	14
Malta	5	5	1	4	4	*4*
Netherlands	8	7	8	7	7	6
Austria	14	12	14	12	12	12
Poland	19	18	17	16	14	15
Portugal *	25	21	20	18	16	16
Slovenia	18	16	17	16	14	13
Slovakia	15	16	12	12	12	11
Finland	9	8	8	8	8	8
Sweden	6	6	7	7	7	6
United Kingdom	6	6	6	6	*6*	*6*
Iceland	6	10	8	11	8	10
Liechtenstein	19	0	0	9	6	0
Norway	7	8	7	8	6	7
Switzerland	8	8	8	8	8	7
Bulgaria	11	12	13	13	13	12
Romania	13	12	11	11	11	11
Turkey	8	10	9	9	6	6

* for the countries not applying the UN "died within 30 day's of the accident" correction factors have been applied

** persons dying within 7 days after accident, no correction factor is applied

Data Source: Eurostat, DG for Energy and Transport (CARE Community Road Accident Database)



The cost of transport is still high at EU level with the number of deaths in road accidents totalling 49.7 thousand persons in 2002. However, there was a decrease of 12.9% in deaths or persons killed per capita in 2002 compared with 1997, i.e. about 7 000 people less even though the traffic has increased during the same period. Counted in deaths per 100 000 inhabitants, the figures for Malta (4), Sweden (6), the United Kingdom (6) and Netherlands (6) are well below the EU-25 average of 11 for 2002. On the other side, Latvia (22), Lithuania (20), Portugal (16) and Estonia (16) have the highest values above the EU-25 average.

There can be several reasons for these differences such as driving habits, poor infrastructure, vehicle fleet (small and/or old vehicles) while the implementation (or lack of) road safety measures is also significant.

ENVIRONMENT INDICATORS

Total Greenhouse Gas Emissions

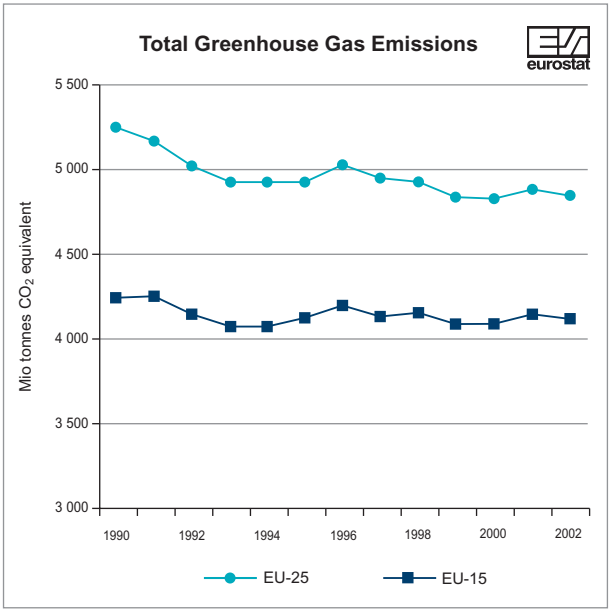
(CO_2 equivalent, Mtonnes)

	1990	1996	2001	2002
EU-25*	***5 194.8***	***5 018.0***	***4 880.0***	***4 852.4***
EU-15	**4 230.7**	**4 203.6**	**4 143.9**	**4 123.3**
Belgium	145.7	159.1	149.2	150.0
Czech Republic	192.1	154.9	148.0	142.8
Denmark	68.8	90.3	69.3	68.5
Germany	1 248.6	1 119.3	1 027.4	1 016.0
Estonia	43.5	23.3	19.4	19.5
Greece	104.8	114.2	134.9	135.4
Spain	284.6	309.8	383.5	399.7
France	564.7	576.3	561.7	553.9
Ireland	53.4	59.2	70.0	68.9
Italy	508.9	517.0	554.2	553.8
Cyprus	:	:	:	:
Latvia	28.9	12.5	10.8	10.6
Lithuania	50.9	29.5	20.8	20.2
Luxembourg**	12.7	10.2	9.8	10.8
Hungary	95.6	80.0	78.9	78.0
Malta	2.2	2.7	2.8	2.8
Netherlands	211.4	234.2	216.1	213.8
Austria	77.7	82.8	84.4	84.6
Poland	459.8	437.4	382.8	382.8
Portugal	57.9	64.6	78.4	81.6
Slovenia	18.7	19.8	20.3	20.4
Slovakia	72.4	54.3	52.3	51.9
Finland	76.8	81.7	80.6	82.0
Sweden	72.1	77.2	68.3	69.6
United Kingdom	742.6	707.8	656.2	634.8
Iceland	2.8	2.8	2.7	2.7
Norway	52.1	54.8	56.7	55.3
Bulgaria	122.1	83.0	65.8	62.4
Romania	231.4	179.9	131.4	136.5
Turkey	:	:	:	:

* Eurostat estimate based on 24 countries - no official data for Cyprus

** Break in series between 1994 and 1995. The drastic decline in emissions in Luxembourg after 1994 is principally due to the conversion of the steel industry to electric furnaces

Data Source: European Environment Agency / European Topic Centre on Air and Climate Change



(CO_2 equivalent, Mtonnes)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	5 195	5 140	5 002	4 899	4 898	4 913	5 018	4 934	4 917	4 837	4 824	4 880	4 852
EU-15	4 231	4 239	4 147	4 076	4 079	4 119	4 204	4 132	4 151	4 083	4 090	4 144	4 123

Data Source: European Environment Agency / European Topic Centre on Air and Climate Change

Note: Total greenhouse gas (GHG) emissions comprise the Kyoto basket of 6 greenhouse gases: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (NO_2), hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulphur hexafluoride (SF_6). They have been weighted according to their global warming potential expressed in CO_2 equivalents using the following weighting factors (IPCC 1996), e.g. CO2=1, CH_4=21 and N_2O=310, SF_6=23 900. HFCs and PFCs comprise a large number of different gases that have different GWPs. Data exclude emissions and removals due to land use changes and forestry.

The greenhouse gas (GHG) emissions in the EU member states are reported under 1992 United Nations Framework Convention on Climate Change and the Decision 280/2004/EC. After an initial decrease in total greenhouse gas emissions in the early 1990s, emissions in the EU-15 fluctuated slightly below the 1990 level for the rest of the 1990s, increasing again by around 1 % from 2000 to 2001 and decreasing slightly for 2002. The favourable situation in the 1990s was largely a result of considerable cuts in emissions in Germany and the United Kingdom. In Germany, the main reasons were increasing efficiency in power and heating plants and economic restructuring of the five new federal states following German reunification. In the United Kingdom the reduction of greenhouse gas emissions was partly a result of the liberalisation of the energy market and subsequent changes in the choice of fuel used in electricity production from oil and coal to gas. Another important factor was significant reductions in emissions of non-carbon dioxide greenhouse gas emissions, including implementation of nitrous oxide abatement measures in the chemical industry.

Total Greenhouse Gas Emissions and Agreed Reduction Targets

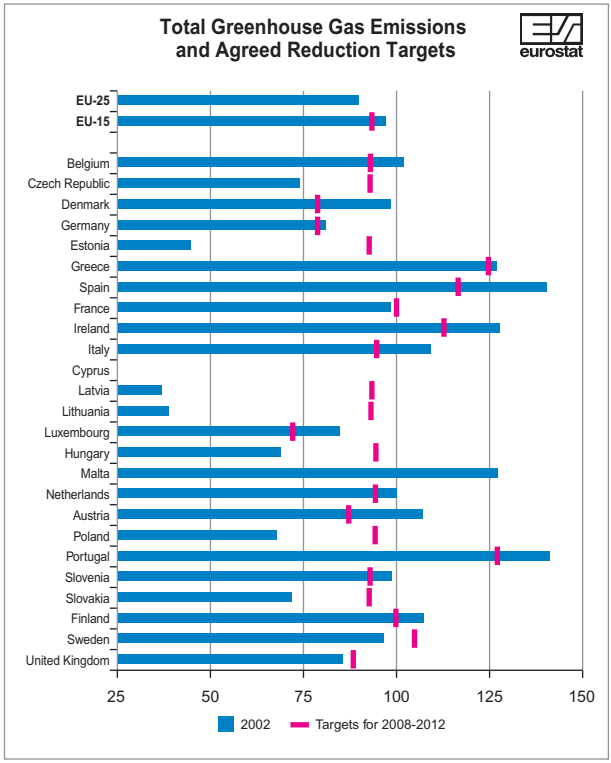
Index (Base Year = 100)

	1990	1996	2001	2002	Targets 2008-12
EU-25*	***97.4***	***94.1***	***91.5***	***91.0***	**:**
EU-15	**99.7**	**99.0**	**97.6**	**97.1**	**92.0**
Belgium	99.2	108.4	101.6	102.1	92.5
Czech Republic	100.0	80.6	77.0	74.3	92.0
Denmark	99.6	130.8	100.4	99.2	79.0
Germany	99.6	89.3	82.0	81.1	79.0
Estonia	100.0	53.7	44.7	44.8	92.0
Greece	97.9	106.7	126.1	126.5	125.0
Spain	99.2	108.0	133.7	139.4	115.0
France	100.0	102.1	99.5	98.1	100.0
Ireland	100.0	110.9	131.1	128.9	113.0
Italy	100.2	101.8	109.1	109.0	93.5
Cyprus	:	:	:	:	:
Latvia	100.0	43.3	37.3	36.9	92.0
Lithuania	100.0	57.9	40.8	39.8	92.0
Luxembourg**	100.0	79.9	76.9	84.9	72.0
Hungary	84.5	70.8	69.8	69.0	94.0
Malta	100.0	123.3	128.5	128.5	:
Netherlands	99.5	110.2	101.7	100.6	94.0
Austria	99.7	106.1	108.2	108.5	87.0
Poland	81.3	77.4	67.7	67.7	94.0
Portugal	100.0	111.7	135.4	141.0	127.0
Slovenia	90.6	95.7	98.1	98.7	92.0
Slovakia	100.2	75.1	72.3	71.8	92.0
Finland	100.0	106.5	105.0	106.8	100.0
Sweden	99.8	106.8	94.5	96.3	104.0
United Kingdom	99.5	94.9	88.0	85.1	87.5
Iceland	100.0	98.4	95.9	95.9	110.0
Norway	100.0	105.2	108.8	106.1	101.0
Bulgaria	86.1	58.5	46.4	44.0	92.0
Romania	88.1	68.5	50.0	52.0	92.0

* Eurostat estimate based on 24 countries - no official data for Cyprus

** Break in series between 1994 and 1995. The drastic decline in emissions in Luxembourg after 1994 is principally due to the conversion of the steel industry to electric furnaces

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change



Note: In the first quantified emission limitation and reduction commitment period, from 2008 to 2012, the EU has agreed to an 8% reduction in its greenhouse gas emissions compared to 1990. Within this overall target, differentiated emission limitation targets have been agreed for each Member State under an EU-15 accord known as the 'burden-sharing' agreement (Council Decision 2002/358/EC).

On 16 February 2005 the Kyoto Protocol under the United Nations Framework Convention on Climate Change became a legally binding agreement on its 128 Parties to reduce greenhouse gas emissions world wide. The EU-15 is one-third of the way towards achieving the 8 % emissions reduction target set for 2008–12; the greenhouse gas emissions decreased by 2.9 % between 1990 and 2002. The new EU Member States and candidate countries have differing targets under the Protocol. No targets exist for Cyprus, Malta and Turkey. Hungary and Poland have reduction targets of 6% from the base year, while the others have reduction targets of 8 %. In general, the base year it is 1990 for carbon dioxide, methane, nitrous oxide, and 1995 for hydrofluorocarbons, perfluorocarbons and sulphur hexafluoride - some countries have selected different base years: Bulgaria (1988), Hungary (average 1985–87), Poland (1988), Romania (1989) and Slovenia (1986).

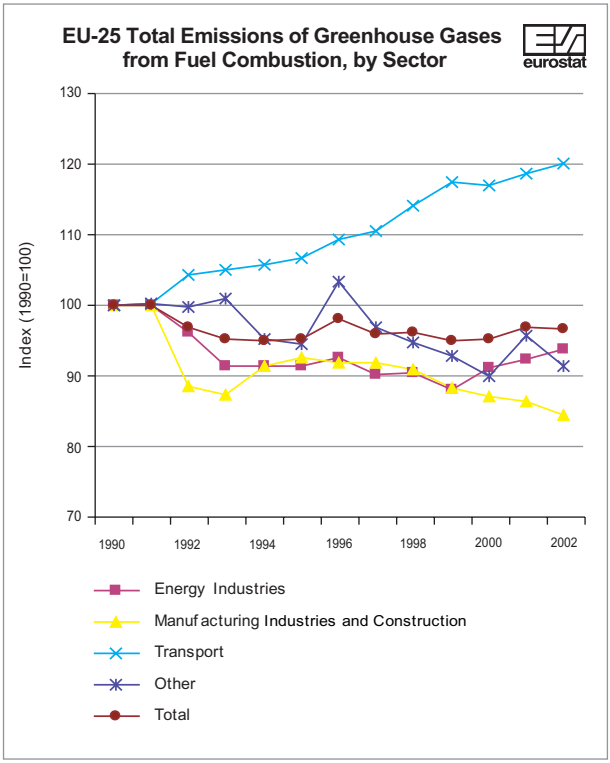
EU-25 Total Emissions of Greenhouse Gases from Fuel Combustion, by Sector

(CO_2 equivalent, Mtonnes)

	Energy Industries	Manufacturing Industries and Construction	Transport	Other	Total
1990	*1 588.2*	*803.1*	*780.1*	*814.5*	*3 986.0*
1991	*1 584.4*	*749.3*	*790.1*	*850.5*	*3 974.3*
1992	*1 522.3*	*717.6*	*815.7*	*813.8*	*3 869.4*
1993	*1 444.1*	*707.5*	*821.4*	*822.7*	*3 795.7*
1994	*1 443.9*	*740.1*	*827.7*	*775.8*	*3 787.5*
1995	*1 442.8*	*747.5*	*835.3*	*772.7*	*3 798.2*
1996	*1 466.0*	*742.2*	*856.7*	*843.6*	*3 908.4*
1997	*1 425.7*	*742.3*	*867.5*	*791.3*	*3 826.8*
1998	*1 431.8*	*736.0*	*894.6*	*774.3*	*3 836.7*
1999	*1 395.5*	*717.2*	*920.7*	*759.0*	*3 792.3*
2000	*1 442.2*	*707.6*	*916.5*	*734.8*	*3 801.2*
2001	*1 435.9*	*717.9*	*930.8*	*790.7*	*3 875.4*
2002	*1 464.4*	*700.7*	*941.4*	*755.2*	*3 861.7*
1990-1996	-7.7%	-7.6%	9.8%	3.6%	-1.9%
1996-2002	-0.1%	-5.6%	9.9%	-10.5%	-1.2%
1990-2002	-7.8%	-12.8%	20.7%	-7.3%	-3.1%

Data Source: European Environment Agency / European Topic Centre on Air and Climate Change

Greenhouse gas emissions from fuel combustion, mainly carbon dioxide from the electricity and heat production sector, fell between 1990 and 2002. Over the same period electricity production and consumption grew considerably. This decoupling of emissions from production was mainly due to a shift from coal to natural gas for electricity production, in fuel use in power production from coal to natural gas, and larger shares of electricity generation from renewable energy sources. During the 1990s carbon dioxide emissions from fossil fuel use in industry decreased, mainly due to fuel efficiency improvements, economic restructuring in Germany and the East European countries, and relatively low economic growth in the EU-15. The largest increase in emissions between 1990 and 2002 was from transport, with road transport the major transport emission source. Emissions increased continuously due to high growth in both passenger and freight transport by road. The increase in carbon dioxide emissions from international aviation and navigation was even higher, but these are currently not addressed in the Kyoto Protocol.



	Energy Industries	Manufacturing Industries and Construction	Transport	Other	Total
1990	100.0	100.0	100.0	100.0	100.0
1991	100.0	99.9	100.0	100.0	100.0
1992	95.9	89.3	104.6	99.9	97.1
1993	90.9	88.1	105.3	101.0	95.2
1994	90.9	92.1	106.1	95.2	95.0
1995	90.8	93.1	107.1	94.9	95.3
1996	92.3	92.4	109.8	103.6	98.1
1997	89.8	92.4	111.2	97.2	96.0
1998	90.2	91.6	114.7	95.1	96.3
1999	87.9	89.3	118.0	93.2	95.1
2000	90.8	88.1	117.5	90.2	95.4
2001	90.4	89.4	119.3	97.1	97.2
2002	92.2	88.1	120.7	92.7	97.1

Data Source: European Environment Agency / European Topic Centre on Air and Climate Change

Total Greenhouse Gas Emissions per Capita

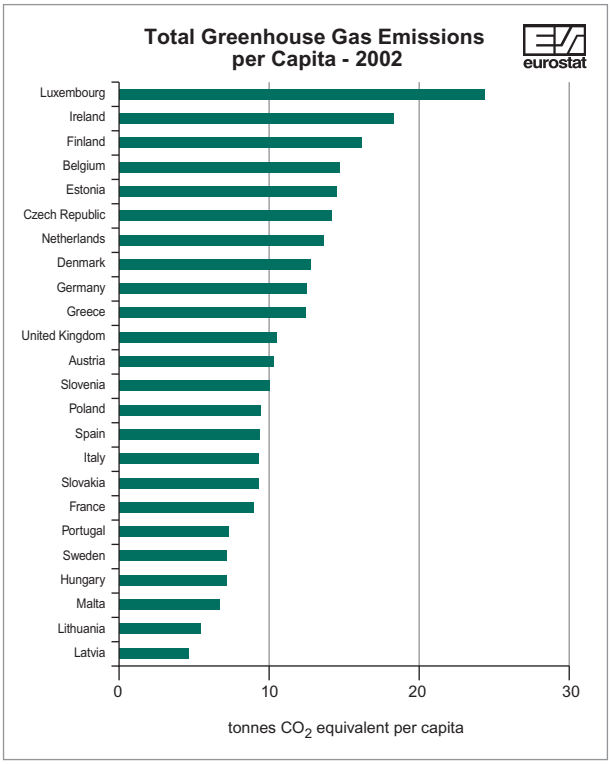
(tonnes CO_2 equivalent per capita)

	1990	1996	2001	2002
EU-25*	**12.0**	**11.3**	**10.8**	**10.7**
EU-15	**11.6**	**11.3**	**10.9**	**10.9**
Belgium	14.6	15.7	14.5	14.5
Czech Republic	18.5	15.0	14.4	14.0
Denmark	13.4	17.2	13.0	12.8
Germany	15.8	13.7	12.5	12.3
Estonia	27.7	16.4	14.2	14.3
Greece	10.4	10.7	12.3	12.3
Spain	7.3	7.9	9.5	9.8
France	10.0	9.9	9.5	9.3
Ireland	15.2	16.4	18.3	17.7
Italy	9.0	9.0	9.6	9.7
Cyprus	:	:	:	:
Latvia	10.8	5.1	4.6	4.5
Lithuania	13.8	8.2	6.0	5.8
Luxembourg**	33.6	24.7	22.3	24.3
Hungary	9.2	7.8	7.7	7.7
Malta	6.3	7.4	7.3	7.2
Netherlands	14.2	15.1	13.5	13.3
Austria	10.2	10.4	10.5	10.5
Poland	12.1	11.3	9.9	9.9
Portugal	5.8	6.4	7.6	7.9
Slovenia	9.4	9.9	10.2	10.2
Slovakia	13.7	10.1	9.7	9.6
Finland	15.4	16.0	15.6	15.8
Sweden	8.5	8.7	7.7	7.8
United Kingdom	12.9	12.1	11.0	10.7
Iceland	11.2	10.4	9.6	9.5
Norway	12.3	12.6	12.6	12.2
Bulgaria	13.9	9.9	8.3	7.9
Romania	10.0	7.9	5.9	6.3
Turkey	:	:	:	:

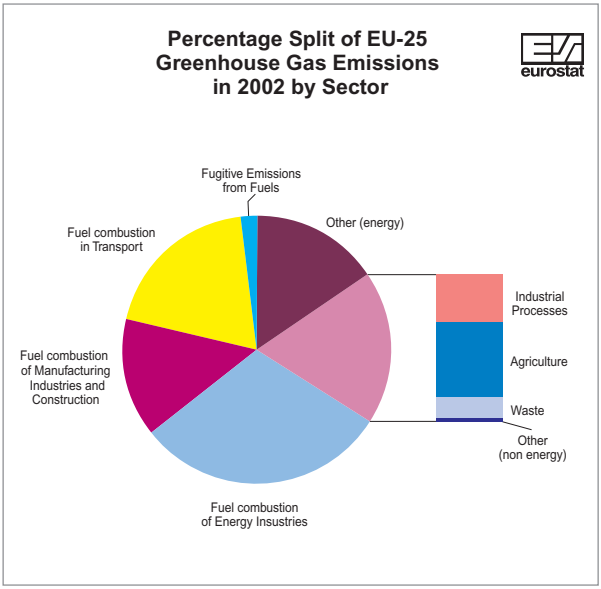
* Eurostat estimate based on 24 countries - no official data for Cyprus

** Break in series between 1994 and 1995. The drastic decline in emissions in Luxembourg after 1994 is principally due to the conversion of the steel industry to electric furnaces

Data Source: European Environment Agency / European Topic Centre on Air and Climate Change



Although overall per capita emissions in EU-15 and EU-25 have fallen since 1990, in nine countries they have risen, significantly in the case of Spain, Ireland, Portugal, Greece, Malta, Slovenia, and Italy. In the EU, per capita emissions are now highest in Luxembourg and Ireland, per capita the greenhouse gas emissions are lowest in Latvia and Lithuania. The data for Luxembourg includes emissions from road fuel sold in Luxembourg, but consumed abroad (fuel tourism).

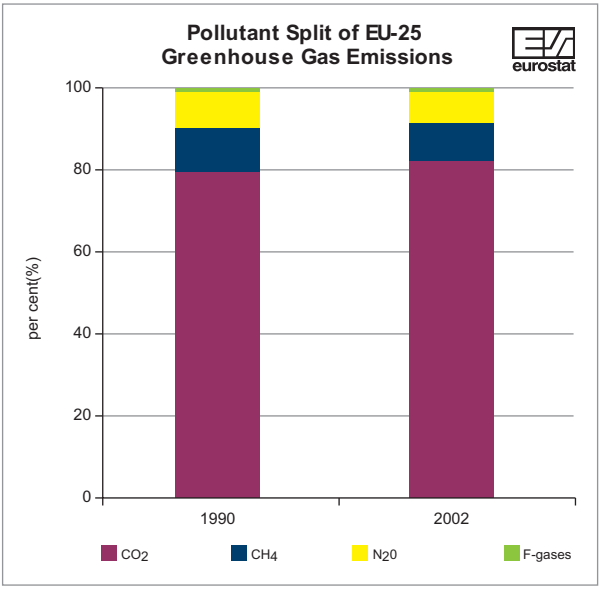


Sector	per cent %
Fuel combustion of Energy Industries	30.2
Fuel combustion of Manufacturing Industries and Construction	14.4
Fuel combustion in Transport	19.4
Fugitive Emissions from Fuels	2.0
Other (energy)	15.6
Industrial Processes	5.9
Agriculture	9.7
Waste	2.6
Other (non-energy)	0.2

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change, Eurostat

ENERGY, TRANSPORT AND ENVIRONMENT INDICATORS

The energy sector (fuel combustion including the transport sector) produces more than 80% of the greenhouse gas emissions. The largest "non-energy" producer is the agriculture with around 10% followed by industrial processes (around 6%) and waste (around 3%). Please, note that the fuel combustion for energy use in the industry and in the agriculture as well as the waste incineration with energy use - all these emissions are count to the Intergovernmental Panel on Climate Change (IPCC) source and sink categories "Energy" (Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories). Germany, United Kingdom, Italy and France together are responsible for more than half of the greenhouse gas emissions from fuel combustion in the EU-25. Poland and Spain produce each 8% of the EU-25 in 2002; the emissions in Netherlands, Czech Republic, Belgium, Greece, and Finland are between 2 and 5% - the contribution of the other member states are smaller.



per cent (%)

	1990	2002
CO_2	79.43	82.01
CH_4	10.84	8.72
N_2O	8.66	7.86
F -gases	1.06	1.42

On the basis of their global warming potential

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change

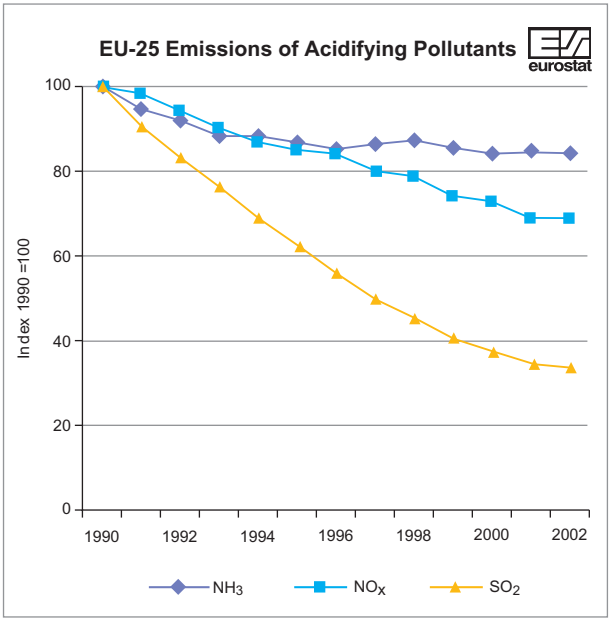
Air emissions of carbon dioxide (CO_2), nitrous oxide (N_2O) methane (CH_4) and some fluorinated gases (hydrofluorocarbons (HFC), perfluorocarbons (PFC) and sulphur hexafluoride (SF_6)) contribute to the changes of heat balance in the atmosphere and to climate change. These gases are known as greenhouse gases (GHG). The GHG emissions of fluorinated gases (F-gases) grew by 24% between 1990 and 2002 because of an increase in the production of hydrofluorocarbons. The production of perfluorocarbons has halved during this period and the sulphur hexafluoride emission has stabilized. CH_4 emission shows the strongest negative trend with 25% between 1990 and 2002. Enteric fermentation in cattle and waste management are the largest sources of CH_4. The largest source of N_2O emissions is agriculture followed by the chemical industries (adipic and nitric acid production). For both, emissions have decreased over the period. However, there is a significant increase in the emissions of N_2O from transport, which is closely linked to the warm-up phase of petrol cars equipped with catalyst. The CO_2 emissions decreased by 4% from 1990 to 2002.

Emissions of Acidifying Pollutants

(Acid equivalent, ktonnes)

	1990	1996	2001	2002
EU-25	***1 364.3***	***944.3***	***736.7***	***723.5***
EU-15	**1 012.8**	**715.6**	**584.2**	**574.5**
Belgium	24.4	20.2	16.3	15.8
Czech Republic	79.8	42.2	19.6	18.6
Denmark	19.5	18.7	11.3	11.1
Germany	271.5	119.6	90.3	87.8
Estonia	10.8	5.4	4.2	4.2
Greece	26.4	27.4	26.7	26.7
Spain	115.1	98.1	98.9	102.0
France	128.5	111.9	94.4	91.9
Ireland	15.0	14.4	14.0	12.7
Italy	121.5	99.8	76.8	76.8
Cyprus	2.3	2.4	2.4	2.5
Latvia	7.1	3.4	2.0	1.9
Lithuania	15.3	6.4	5.7	5.5
Luxembourg	1.4	1.1	0.9	0.9
Hungary	44.0	29.9	20.4	19.0
Malta	:	:	:	:
Netherlands	32.2	23.7	19.7	19.1
Austria	10.5	9.1	8.7	8.7
Poland	158.0	120.5	85.7	85.7
Portugal	18.5	17.2	17.9	18.6
Slovenia	8.9	6.3	4.5	4.7
Slovakia	25.3	12.2	8.0	7.1
Finland	16.9	11.2	9.4	9.1
Sweden	13.6	12.4	10.4	10.3
United Kingdom	197.8	130.9	88.7	83.1
Iceland	1.3	1.4	1.4	1.4
Norway	7.7	7.4	6.9	6.6
Bulgaria	79.1	54.9	36.8	36.8
Romania	70.5	48.4	48.4	48.4
Turkey	37.9	55.4	62.8	62.8

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change



(Acid equivalent, ktonnes)

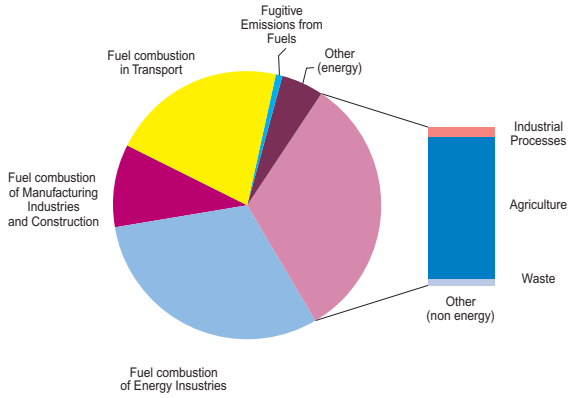
	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
NH_3	269	256	247	239	236	235	232	234	236	233	227	230	227
NO_x	349	342	330	315	305	298	293	281	272	262	254	245	242
SO_2	746	680	621	569	520	466	419	375	342	306	272	262	255

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change

Note: The acidifying substances considered in this publication are sulphur dioxide (SO_2), nitrogen oxides (NOx) and ammonia (NH_3). Emissions of these gases are associated with the formation of acid rain and they are expressed in terms of their acidifying potential in acid equivalents (de Leeuw, 2002). Acid equivalents are estimated as follows: sulphur dioxide * 1/32; nitrogen oxides (as equivalent amount nitrogen dioxide) * 1/46 and ammonia * 1/17.

The Member States have signed the Gothenburg Protocol of 1 December 1999 to the United Nations Economic Commission for Europe Convention on long-range transboundary air pollution to abate acidification, eutrophication and ground-level ozone. Significant areas of the Community are exposed to depositions of acidifying and eutrophying substances at levels which have adverse effects on the environment. By the year 2010 at the latest, Member States shall limit their annual national emissions of the pollutants sulphur dioxide (SO_2), nitrogen oxides (NOx), volatile organic compounds (VOC) and ammonia (NH_3) to amounts not greater than the emission ceilings laid down in Annex I of the EU National Emission Ceilings Directive (NEC Directive 2001/81/EC). Emissions of SO_2, NOx, and NH_3 are associated with the formation of acid rain. The emissions of these acidifying pollutants in the EU-25 have decreased by 47% since 1990. However, substantial reduction of NOx is still required.

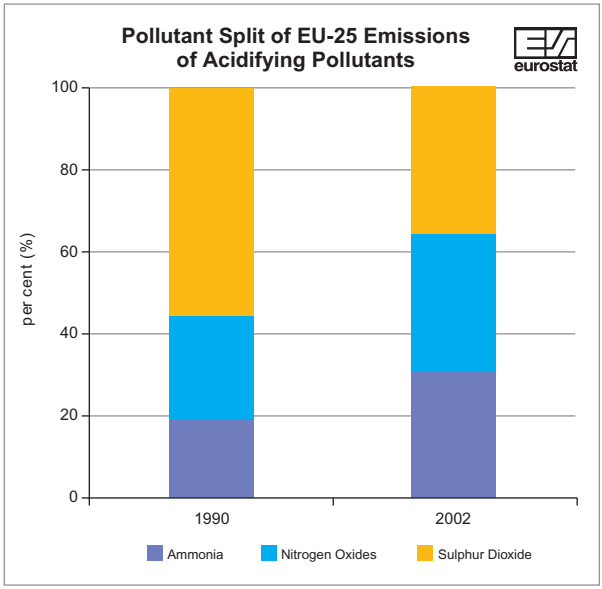
Percentage Split of EU-25 Emissions of Acidifying Pollutants in 2002 by Sector



Sector	per cent (%)
Fuel combustion of Energy Industries	28.9
Fuel combustion of Manufacturing Industries and Construction	10.4
Fuel combustion in Transport	21.6
Fugitive Emissions from Fuels	0.7
Other (energy)	5.4
Industrial Processes	2.1
Agriculture	30.0
Waste	1.0
Other (non-energy)	0.1

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change

The major emission sources of acidifying pollutants, accounting for 91 % of total emissions in the EU-25, are fuel combustion (NOx and SO_2), animal husbandry and use of nitrogen fertilisers (NH_3). The substantial decreases recorded are mainly due to reduction of SO_2 emissions following a switch from high sulphur fuels to natural gas, the use of low sulphur coal and introduction of flue gas desulphurisation in power plants. Since 1990, there have been significant reductions in emissions of NOx from the road transport and energy sectors. This is to a large extent due to the introduction of catalysts on new cars and the introduction of combined cycle gas turbine power generation.



per cent (%)

	1990	2002
Ammonia	19.7	31.4
Nitrogen Oxides	25.6	33.4
Sulphur Dioxide	54.7	35.2

On the basis of their acidifying potential

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change

Reducing emissions of the pollutants causing acidification and exposure to ground-level ozone will also reduce soil eutrophication and improve the air quality. The acidifying substances sulphur dioxide (SO_2) and nitrogen oxide (NOx) and ammonia (NH_3) are also precursor gases of secondary particulate matter (secondary aerosols), expressed in PM10 equivalents (particles with an aerodynamic diameter of 10 µm and smaller). The estimates of direct emissions of PM10 (primary aerosols) as well as the secondary aerosols have a larger degree of uncertainty than estimates of the gaseous air pollution emissions. Hence the aerosol (primary and secondary) estimates are not covered in this report but further research studies are needed to improve the data quality.

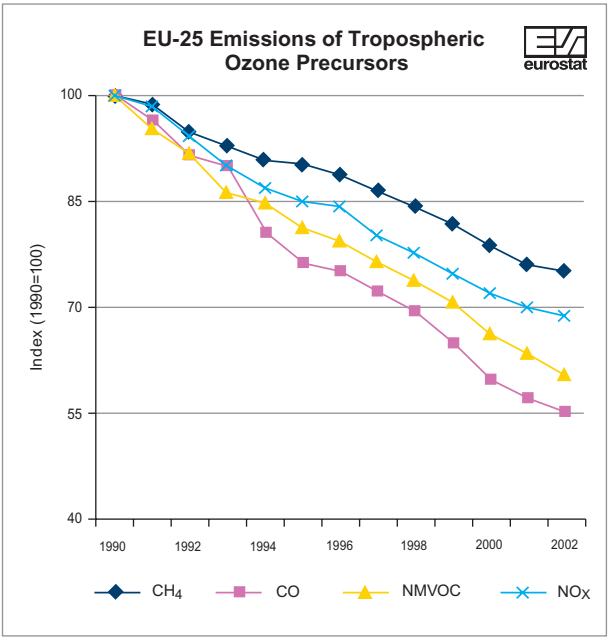
Emissions of Tropospheric Ozone Precursors

(NMVOC equivalent, ktonnes)

	1990	1996	2001	2002
EU-25	***43 656.5***	***35 344.2***	***28 677.9***	***27 955.1***
EU-15	**36 867.6**	**30 193.2**	**24 662.7**	**23 992.6**
Belgium	829.2	753.3	748.6	728.1
Czech Republic	1 254.1	859.2	703.4	658.0
Denmark	594.5	623.8	444.2	435.4
Germany	8 389.4	5 201.2	4 064.9	3 837.4
Estonia	221.7	135.6	100.1	107.4
Greece	757.3	812.8	829.5	829.7
Spain	3 618.9	3 541.7	3 586.8	3 601.0
France	6 063.8	5 022.9	4 081.8	3 888.2
Ireland	313.3	306.5	285.3	270.7
Italy	5 193.0	4 872.1	3 642.6	3 641.9
Cyprus	45.7	49.3	45.8	52.2
Latvia	339.2	182.8	178.7	182.6
Lithuania	363.1	198.7	165.3	161.1
Luxembourg	66.6	54.5	41.4	41.4
Hungary	613.1	480.4	463.2	448.7
Malta	0.2	0.3	0.3	0.3
Netherlands	1 338.8	1 089.1	841.2	823.1
Austria	700.4	582.0	532.3	536.4
Poland	3 246.5	2 737.5	1 972.5	1 972.5
Portugal	644.5	694.1	671.7	705.2
Slovenia	131.3	146.4	132.7	132.5
Slovakia	574.1	360.9	253.3	247.2
Finland	655.6	563.3	497.9	474.6
Sweden	1 035.4	872.5	690.0	678.9
United Kingdom	6 667.0	5 203.4	3 704.5	3 500.7
Iceland	51.5	53.8	48.4	48.4
Norway	667.0	734.5	726.5	667.6
Bulgaria	772.5	540.4	426.9	426.9
Romania	1 819.0	1 304.4	1 299.7	1 299.1
Turkey	1 642.5	2 274.5	2 301.6	2 301.6

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change

Note: The ozone precursors considered in this publication are nitrogen oxides (NOx), volatile organic compounds without methane (NMVOC), carbon monoxide (CO), and methane (CH_4). Emissions of these four groups of gases are associated with the formation of tropospheric ozone and expressed in NMVOC equivalent (de Leeuw, 2002). The weighting factors for the ozone forming potential: nitrogen oxides=1.22, non-methane volatile organic compounds=1, carbon monoxide=0.11, methane=0.014.



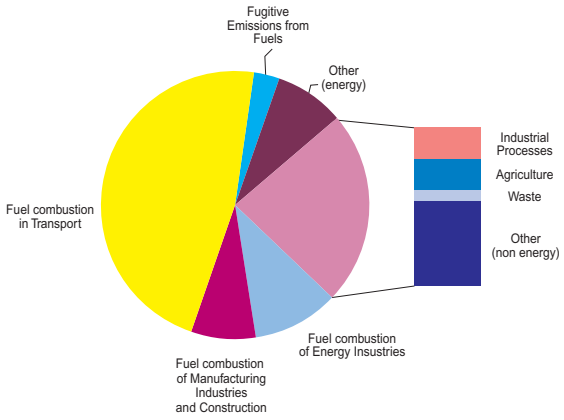
(NMVOC equivalent, ktonnes)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
CH_4	376	369	358	351	344	339	333	325	317	308	297	287	282
CO	6 750	6 492	6 210	6 085	5 452	5 188	5 088	4 877	4 650	4 410	4 048	3 872	3 731
NMVOC	16 931	16 182	15 584	14 777	14 420	13 833	13 457	13 044	12 583	12 038	11 286	10 758	10 386
NO_x	19 599	19 194	18 532	17 696	17 117	16 705	16 466	15 776	15 247	14 707	14 252	13 760	13 556

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change

The World Health Organization guideline values for the protection of human health and vegetation from photochemical pollution are substantially exceeded in all Member States. In the stratosphere (upper atmosphere) ozone plays an important role in filtering out harmful ultraviolet radiation from the sun. In the troposphere (lower atmosphere) however, ozone is damaging human health and the vegetation and acts also as a greenhouse gas. In the lower troposphere ozone is formed when oxides of nitrogen and volatile organic compounds react together in the presence of sunlight. During the summer months when temperatures are high, sunlight abundant and the weather calm, chemical reactions amongst the mixture of gases in the atmosphere increase. During these occasions high levels of ozone and other oxidants may be formed, know as photochemical smog.

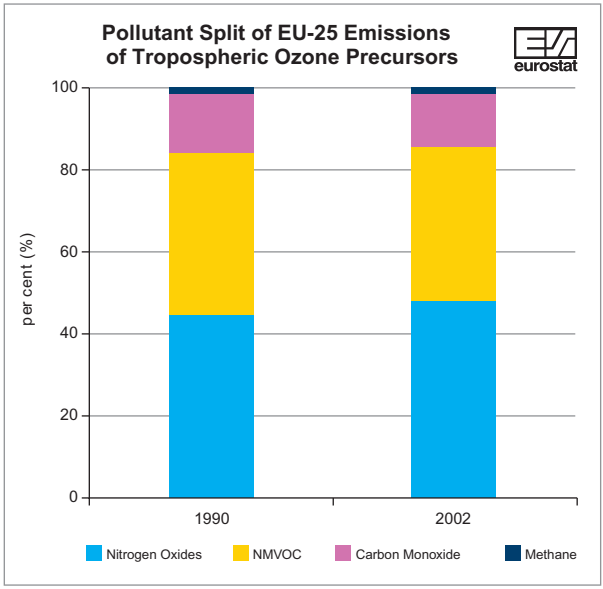
Percentage Split of EU-25 Emissions of Tropospheric Ozone Precursors in 2002 by Sector



Sector	per cent (%)
Fuel combustion of Energy Industries	10.3
Fuel combustion of Manufacturing Industries and Construction	7.9
Fuel combustion in Transport	46.9
Fugitive Emissions from Fuels	3.1
Other (energy)	8.5
Industrial Processes	4.6
Agriculture	4.5
Waste	1.8
Other (non-energy)	12.5

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change

Motor vehicles and combustion sources are the major contributor of oxides of nitrogen and volatile organic compounds. Industry also makes significant contributions. Certain ecosystems such as forests also emit various organic compounds, such as isoprene and terpenes.



per cent (%)

	1990	2002
Nitrogen Oxides	44.9	48.5
NMVOC	38.8	37.2
Carbon Monoxide	15.5	13.3
Methane	0.9	1.0

On the basis of their ozone forming potential

Data Source: European Environment Agency/European Topic Centre on Air and Climate Change

Four groups of pollutants mainly contribute to the formation of tropospheric ozone ('ozone precursors'): nitrogen oxides (NOx), volatile organic compounds without methane (NMVOC), carbon monoxide (CO), and methane (CH_4). Total ozone precursor emissions are falling in most countries and the EU as a whole and have been reduced in the EU by some 36% between 1990 and 2002. The reduction varies from -25% for CH_4 down to -45% for CO emissions. The reduction for NOx is about 31% and is mainly due to the expansion in the use of low NOx combustion technology and catalysts for cars. The 39% reduction of NMVOCs is also attributed to the use of catalysts for cars and a reduction in fugitive emissions from fuel handling processes (e.g. recovering fuel gases in tanking operations). However, substantial reductions of both NMVOCs and NOx are still required to achieve 2010 targets of the EU national emissions ceilings directive (NECD, Directive 2001/81/EC).

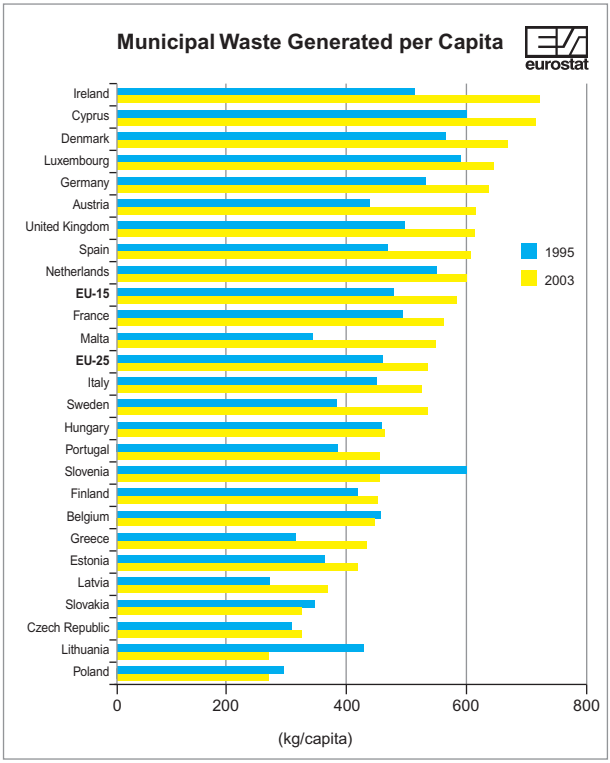
Municipal Waste Generated

(kg/capita)

	1995	1998	2001	2002	2003
EU-25	**457**	**487**	**520**	**531**	**534**
EU-15	**482**	**516**	**558**	**574**	**577**
Belgium	455	459	462	462	446
Czech Republic	*302*	293	273	279	280
Denmark	567	593	677	668	675
Germany	533	546	600	640	638
Estonia	357	383	372	406	418
Greece	306	388	417	422	428
Spain	*467*	530	595	588	*609*
France	489	522	545	557	*561*
Ireland	514	557	707	698	*732*
Italy	450	466	508	525	*523*
Cyprus	600	664	703	709	724
Latvia	263	247	302	369	362
Lithuania	424	443	300	288	263
Luxembourg	592	629	650	*653*	*658*
Hungary	460	484	451	457	463
Malta	*338*	385	550	474	549
Netherlands	549	593	612	615	599
Austria	438	532	578	611	610
Poland	285	306	287	272	260
Portugal	385	423	472	447	452
Slovenia	596	584	479	479	451
Slovakia	340	316	390	283	*319*
Finland	*414*	466	466	457	450
Sweden	*380*	431	442	468	471
United Kingdom	496	536	582	600	610
Iceland	918	973	1 006	1 022	1 040
Norway	626	647	635	677	696
Bulgaria	693	495	505	500	499
Romania	342	277	336	383	*364*
Turkey	472	533	474	479	*474*

Country estimate

Data Source: Eurostat



Municipal waste consists of waste generated by households, and waste collected in the municipal collection scheme from businesses and institutions. The amount of waste generated per person is higher in the old Member States (EU-15) than in the new Member States. Moreover, the amount of waste generated rises in the old Member States between 1995 and 2003, whereas the amounts of waste generated in the new Member States decreases on average. The average for the new Member States results from both increasing and decreasing trends in the individual countries.

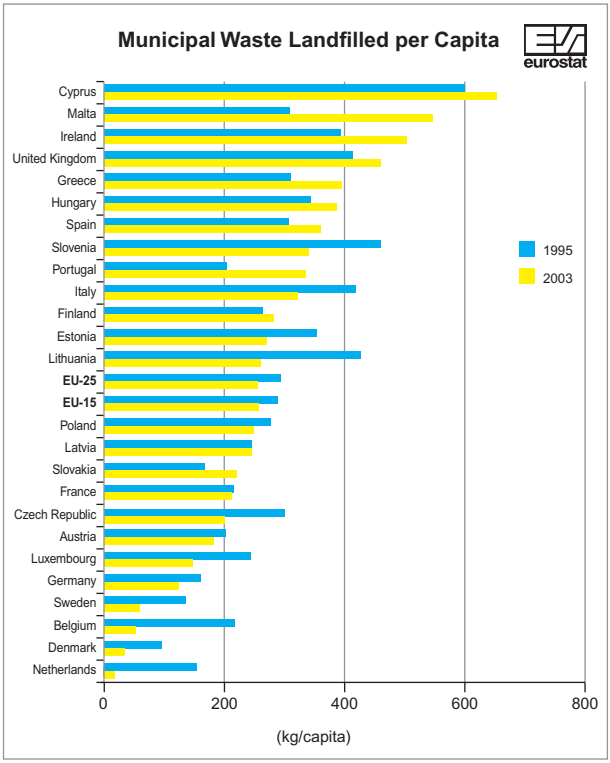
Municipal Waste Landfilled

(kg/capita)

	1995	1998	2001	2002	2003
EU-25	**294**	**287**	**276**	**267**	**261**
EU-15	**293**	**281**	**275**	**264**	**259**
Belgium	218	108	62	58	56
Czech Republic	*302*	*272*	*214*	205	201
Denmark	96	67	46	40	34
Germany	*245*	199	160	137	127
Estonia	355	382	295	308	274
Greece	*316*	354	380	385	393
Spain	*309*	*318*	365	360	*361*
France	219	236	222	219	*214*
Ireland	398	478	541	504	*505*
Italy	419	361	341	325	*323*
Cyprus	600	601	634	638	653
Latvia	247	230	285	280	248
Lithuania	424	443	300	288	263
Luxembourg	161	146	131	*146*	*149*
Hungary	346	396	380	389	390
Malta	*311*	345	472	474	549
Netherlands	158	54	50	50	16
Austria	205	186	192	188	183
Poland	280	300	275	263	251
Portugal	200	310	355	328	338
Slovenia	457	512	358	351	*344*
Slovakia	168	181	*209*	222	*222*
Finland	*268*	294	284	291	285
Sweden	136	120	99	93	64
United Kingdom	410	452	465	464	460
Iceland	768	837	861	855	867
Norway	456	417	105	107	102
Bulgaria	530	382	403	404	407
Romania	254	224	266	307	288
Turkey	324	368	357	*353*	*349*

Country estimate

Data Source: Eurostat



The amount of waste landfilled depends on the national policy on waste management; that is, it depends on the importance given to waste avoidance, incineration and recycling. Landfill is still by far the most common option for the disposal of municipal waste. Nevertheless there has been a sharp decline in the amount of waste landfilled in a lot of Member States. In some countries only a small fraction of municipal waste is currently deposited in landfills.

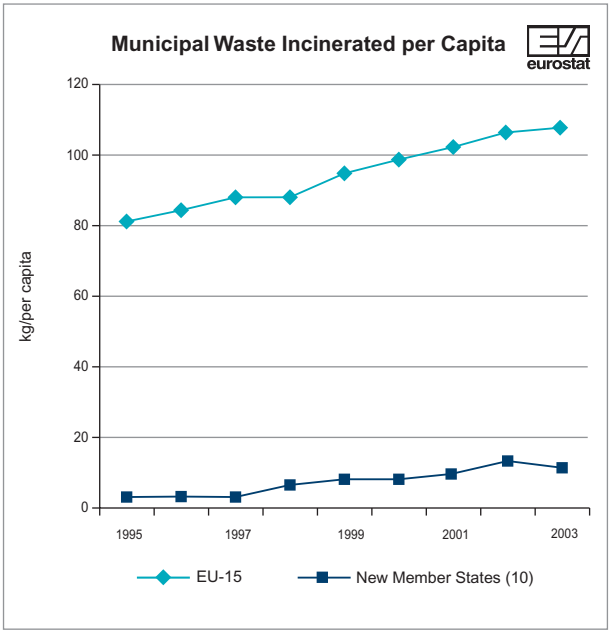
Municipal Waste Incinerated

(kg/capita)

	1995	1998	2001	2002	2003
EU-25	**68**	**76**	**87**	**91**	**92**
EU-15	**81**	**89**	**102**	**106**	**108**
Belgium	163	164	161	158	159
Czech Republic	0	17	35	39	39
Denmark	294	312	374	374	363
Germany	*97*	112	135	143	146
Estonia	0	0	1	0	0
Greece	0	0	0	0	0
Spain	*24*	*38*	37	38	*40*
France	183	172	181	187	*189*
Ireland	0	0	0	0	0
Italy	*24*	34	44	47	*49*
Cyprus	0	0	0	0	0
Latvia	0	0	12	23	10
Lithuania	0	0	0	0	0
Luxembourg	312	288	275	*284*	*274*
Hungary	32	35	35	28	24
Malta	0	0	0	0	0
Netherlands	139	198	199	194	197
Austria	54	55	65	66	65
Poland	0	0	0	1	1
Portugal	0	0	104	91	98
Slovenia	0	0	0	2	*3*
Slovakia	0	0	0	29	*29*
Finland	0	28	41	39	41
Sweden	*149*	165	169	188	212
United Kingdom	35	37	43	46	45
Iceland	56	55	39	35	38
Norway	84	85	99	109	120
Bulgaria	0	0	0	0	0
Romania	0	0	0	0	0
Turkey	0	0	0	0	0

Country estimate

Data Source: Eurostat



(kg/capita)

	1995	1996	1997	1998	1999	2000	2001	2002	2003
EU-15	81	84	88	89	95	99	102	106	108
New MS (10)	4	4	4	7	9	9	10	13	12

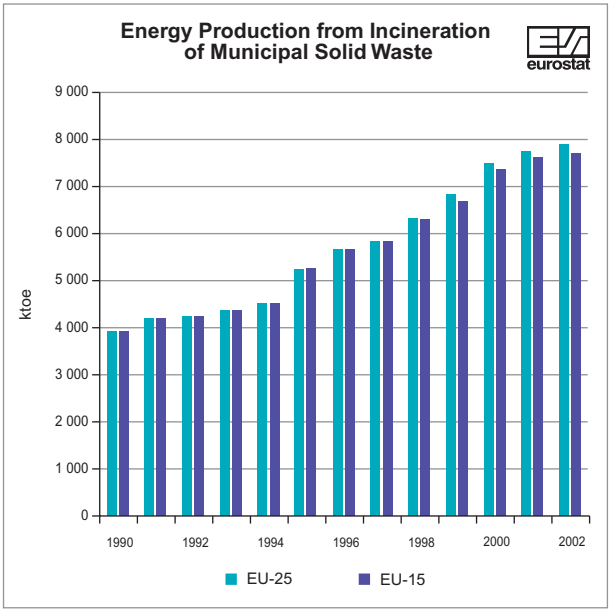
The levels of municipal waste incinerated vary, depending on the number and location of suitable incinerators and on national waste management policies. Many Member States do not have incineration plants, or have taken up incineration of waste only recently. The amount of municipal waste incinerated is rising in both the old and the new Member States.

Energy Production from Incineration of Municipal Solid Waste

(ktoe)

	1990	1995	2000	2001	2002
EU-25	**3 963**	**5 216**	**7 438**	**7 707**	**7 837**
EU-15	**3 963**	**5 216**	**7 289**	**7 514**	**7 677**
Belgium	281	323	323	317	346
Czech Republic	:	:	88	105	108
Denmark	370	547	726	770	812
Germany	1 071	1 124	1 362	1 433	1 433
Estonia	-	-	-	-	-
Greece	-	-	-	-	-
Spain	81	187	279	279	279
France	1 146	1 640	1 854	1 908	1 932
Ireland	-	-	-	-	-
Italy	22	124	334	397	426
Cyprus	-	-	-	-	-
Latvia	-	-	-	-	-
Lithuania	-	-	-	-	-
Luxembourg	25	23	27	28	27
Hungary	:	:	60	62	48
Malta	:				
Netherlands	429	497	1 097	1 060	1 061
Austria	58	88	149	110	117
Poland	:	:	2	1	0
Portugal	:	:	174	175	182
Slovenia	-	-	-	-	-
Slovakia	:	:	:	25	4
Finland	19	12	45	77	74
Sweden	350	395	498	495	480
United Kingdom	112	254	420	466	508
Iceland	0	1	2	1	2
Norway	95	115	124	120	134
Bulgaria	-	-	-	-	-
Romania	-	-	-	-	-
Turkey	-	-	-	-	-

Data Source: Eurostat



(ktoe)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
EU-25	3 963	4 126	4 215	4 343	4 509	5 216	5 666	5 909	6 271	6 826	7 438	7 707	7 837
EU-15	3 963	4 126	4 215	4 343	4 509	5 216	5 666	5 909	6 271	6 725	7 289	7 514	7 677

Data Source: Eurostat

Water Use per Capita in different sectors

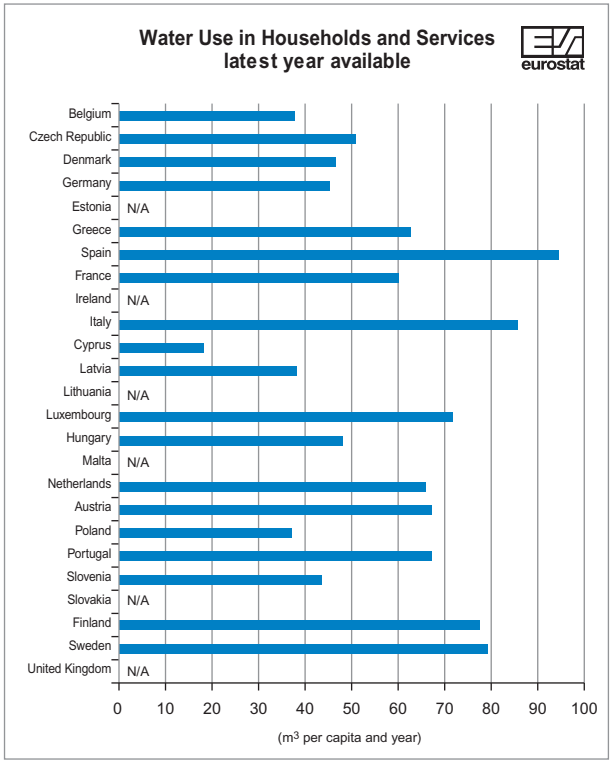
(m^3 per capita and year)

	agriculture, fisheries, forestry	manufacturing industry	domestic (households and services)
Belgium	3.71[8)]	154.28[8)]	37.46[8)]
Czech Republic	2.45	33.23	50.56
Denmark	29.32	:	46.84[1)]
Germany	:	62.63[1)]	45.89[1)]
Estonia	44.72[1)]	20.31[1)]	:
Greece	:	:	62.17[7)]
Spain	9.60[1)]	9.41[1)]	94.84[1)]
France	:	:	59.78[8)]
Ireland	:	:	:
Italy	1.45[9)]	:	85.41[9)]
Cyprus	189.97[8)]	30.36[1)]	17.67[8)]
Latvia	18.94[1)]	34.78[1)]	37.58[1)]
Lithuania	16.06	12.05	:
Luxembourg	0.70[9)]	32.29[9)]	72.01[9)]
Hungary	0.46	1.95	47.79
Malta	:	:	:
Netherlands	8.41[9)]	206.07[1)]	65.50[1)]
Austria	:	:	66.49[7)]
Poland	28.84	16.45	36.44
Portugal	997.30[5)]	:	67.13[8)]
Slovenia	:	50.65[1)]	44.02[1)]
Slovakia	12.46	:	:
Finland	:	181.20[9)]	78.21
Sweden	16.58	224.99	79.55
United Kingdom	:	:	:
Iceland	219.11	34.78	111.30
Norway	16.02	372.49[9)]	65.86
Switzerland	:	:	102.45[1)]
Bulgaria	1.27	39.62	42.37
Romania	:	:	37.20
Turkey	:	:	:

Water use in sectors (public supply + self supply)
latest available year (2002 unless otherwise indicated)

5) 1995
7) 1997
8) 1998
9) 1999
1) 2001

Data Source: Eurostat



Please note that all data are the total of water use from public supply and self supply

In the sector 'Agriculture, fisheries and forestry', data on water use for irrigation are missing for some countries, which affects comparability – this explains the high amounts in Portugal and Cyprus as compared with the low figures for Spain and Italy. The high figure for Iceland is due to water use in land-based fish farming.
In the manufacturing industry sector, the especially high water needs of the pulp and paper industries are reflected in the water use figures of Sweden, Finland and Norway.
Water use figures are more evenly distributed in the domestic sector. Water use is highest in some southern European countries (Italy, Spain) where climatic conditions increase the water need. Domestic water use figures also reflect not only the number of water-consuming home appliances in a country's households (e.g. Luxembourg as opposed to Poland) but also reduced consumption due to water pricing policies.

Total investments in Electricity, Gas and Water supply (all environmental domains)

(1000 Euro, Current prices)

	1999	2000	2001	2002
Belgium	19 912	:	:	:
Czech Republic	254 654	124 470	90 814	108 724
Denmark	:	:	:	:
Germany*	270 000	100 000	160 000	:
Estonia	16 854	20 151	7 043	14 457
Greece	138 344	:	:	:
Spain	10 764	66 610	44 160	77 850
France	132 646	97 293	316 200	:
Ireland	:	:	:	:
Italy	:	:	1 463 498	:
Cyprus	:	:	:	371
Latvia	208	215	1 250	861
Lithuania	3 325	5 106	3 057	3 790
Luxembourg	:	:	:	:
Hungary	43 336	55 429	28 505	34 973
Malta	:	:	:	:
Netherlands	20 326	21 453	8 939	:
Austria	8 818	9 165	:	:
Poland	543 868	373 802	454 177	352 801
Portugal	24 266	9 245	7 451	12 318
Slovenia	:	:	21 917	8 015
Slovakia	80 818	22 635	22 786	42 511
Finland	6 901	16 455	:	:
Sweden	46 778	48 430	88 708	102 717
United Kingdom	157 878	308 461	517 468	162 842
Iceland	:	:	:	:
Norway	:	:	:	:
Bulgaria	10 737	56 984	68 782	39 298
Romania	83 694	12 345	35 714	49 519
Turkey	103 975	124 500	55 454	:

* Only pollution prevention investments

Data Source: Eurostat

Environmental protection investments vary considerably from year to year and between the countries. This is due to the fact that individual enterprises or specific industries have, as a result of increased governmental demands or the availability of new standard technology, very large investments in a single year which may be followed by small investment amounts in subsequent years.

In some countries (e.g. UK and Hungary) more than half of the money invested in environmental protection is spent on cleaner technologies and other measures to reduce the generation of pollution at the source. However, in most countries the majority of the environmental protection investments aim at taking care of and treating the pollution generated by production processes. It should be stressed that pollution prevention investments are sometimes difficult to measure correctly which may lead to some underestimation. In addition, pollution prevention may occur as a positive side-effect from e.g. normal replacement of worn-out machinery where no expenditure specifically linked to environmental protection can be identified.

Total Investments by Main Sectors for the Protection of Air

(1000 Euro, Current prices)

	Mining and quarrying		Manufacturing		Electricity, gas and water supply		Public sector	
	2000	**2002**	**2000**	**2002**	**2000**	**2002**	**2000**	**2002**
Belgium	:	128	:	51 366	:	:	97	90
Czech Republic	6 452	12 148	56 973	35 223	48 882	32 129	108 781	50 471
Denmark	:	:	:	:	:	:	158 205	113 927
Germany*	20 000	10 000	630 000	670 000	50 000	70 000	20 000	20 000
Estonia	0	134	5 752	4 455	7 855	10 801	173	26
Greece	:	:	:	:	:	:	:	:
Spain	4 417	8 630	274 356	219 880	1 953	15 790	:	:
France	:	4 300	:	268 000	:	32 900	10 400	10 300
Ireland	:	:	:	:	:	:	:	:
Italy	:	16 324	:	239 931	:	966 715	10 995	39 826
Cyprus	:	535	:	8 311	:	0	:	:
Latvia	:	0	:	3 786	:	344	:	688
Lithuania	2	86	5 640	11 143	3 504	1 220	101	22
Luxembourg	:	:	:	:	:	:	:	:
Hungary	69	420	111 927	27 400	37 763	25 243	:	2 235
Malta	:	:	:	:	:	:	:	:
Netherlands	10 467	35 486	221 909	183 599	18 185	2 723	130	42
Austria	2 015	:	45 542	:	5 805	:	2 770	2 781
Poland	9 421	6 688	212 980	85 886	279 145	216 518	52 590	37 175
Portugal	1 912	2 248	120 349	94 524	7 601	898	2 358	620
Slovenia	:	409	:	24 947	:	5 976	:	:
Slovakia	:	13	:	22 186	:	6 527	:	9 479
Finland	:	:	76 895	:	12 733	:	:	:
Sweden	2 250	3 384	115 806	94 967	28 063	72 153	:	:
United Kingdom	139 464	58 362	756 385	191 148	182 123	46 276	13 538	62 815
Island	:	:	:	:	:	:	:	:
Norway	:	391	:	35 028	:	:	:	1 332
Bulgaria	0	308	5 647	16 160	33 369	6 362	0	0
Romania	1 889	9 408	44 082	48 012	1 824	8 866	0	0
Turkey	:	:	:	:	124 391	47 288	5 919	151

* only pollution treatment investments included

2001 figures

Data Source: Eurostat

In most EU countries, manufacturing industry typically accounts for more than 80% of the total amount of money industry spends on environmental protection, while Electricity, Gas and Water supply accounts for around 10 percent, and mining and quarrying have only a minor share. Despite the low share of total environmental protection investments spent by the Electricity, Gas and Water supply industry, this industry invests more than half in pollution prevention equipment compared with total industry.

Pollution prevention investments for the air domain lead to modified production processes which serve to reduce the amount of air pollution generated. When a new production process is introduced, the environmental protection expenditure consists of the outlays over and above what would have been paid for a cheaper, viable, but less environmentally benign equipment. Where an existing plant is modified, the environmental investment is equal to the total outlays for the environmental adaptation.

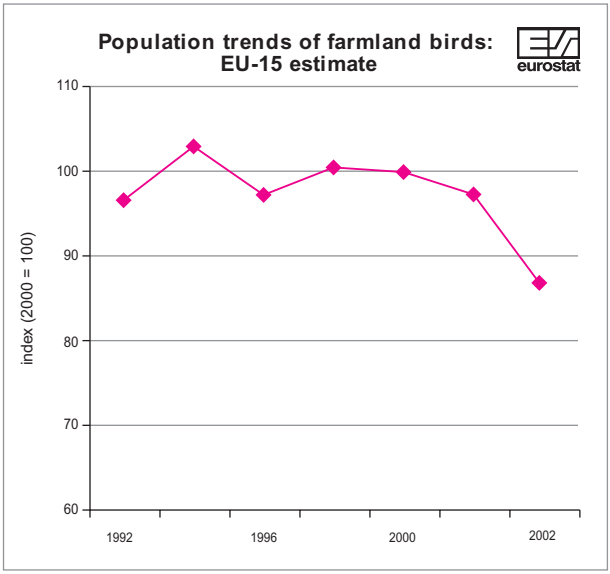
Spending on environmental protection by the public sector varies between countries. Nevertheless the majority of countries decreased their spending on the protection of air between 2000 and 2002 (for example Poland, the Netherlands and Portugal). A few, such as Italy and United Kingdom, increased their spending.

Population Trends of Farmland Birds

Index (2000=100)

	1992	1994	1996	1998	2000	2001	2002
EU-25	**:**	**:**	**:**	**:**	**100**	**:**	**:**
EU-15	**96.9**	**103.1**	**97.1**	**100.2**	**100**	**97.2**	**88**
Belgium	139.7	138.9	126	110.1	100	113.2	109.1
Czech Republic	117.5	123.9	124.9	110.2	100	107	:
Denmark	102.3	106.3	97.8	95.9	100	102.5	:
Germany	89.9	105.7	117.1	101.7	100	98.3	:
Estonia	94.8	92.9	104.6	85.5	100	:	:
Greece	:	:	:	:	100	:	:
Spain	:	:	80.9	96.9	100	98.6	96.5
France	121.8	119.7	108.1	111.3	100	98.4	:
Ireland	:	:	:	84.7	100	:	:
Italy	:	:	:	:	100	82.8	:
Cyprus	:	:	:	:	100	:	:
Latvia	:	:	105.7	123.8	100	135.6	111.7
Lithuania	:	:	:	:	100	:	:
Luxembourg	:	:	:	:	100	:	:
Hungary	:	:	:	:	100	95.4	96.5
Malta	:	:	:	:	100	:	:
Netherlands	112.5	117.2	111.3	115.8	100	93.9	:
Austria	:	:	:	98.2	100	94.3	96.3
Poland	:	:	:	:	100	97.5	94.8
Portugal	:	:	:	:	100	:	:
Slovenia	:	:	:	:	100	:	:
Slovakia	:	:	:	:	100	:	:
Finland	:	:	:	:	100	:	:
Sweden	102.7	113.3	96.8	101.3	100	90.2	88
United Kingdom	118.8	111.2	111.1	98.5	100	:	:
Iceland	:	:	:	:	100	:	:
Norway	:	:	93.5	95.8	100	92.6	97.8
Bulgaria	:	:	:	:	100	:	:
Romania	:	:	:	:	100	:	:
Turkey	:	:	:	:	100	:	:

Data Source: Pan-European Common Bird Monitoring Scheme



This indicator, retained as a structural indicator, is an aggregated index (base year 2000) of population trend estimates of a selected group of breeding bird species dependent on agricultural land for nesting or feeding (23 common bird species in Europe). The EU index is based on trend data from 16 EU Member States. The farmland bird index declined by around a third between 1980 and 2002, and this trend appears to continue.

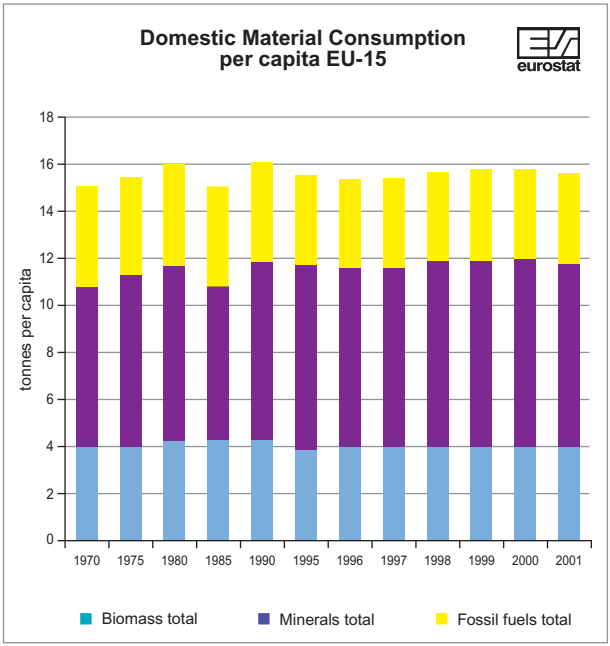
The population counts are carried out by a network of volunteer ornithologists coordinated within national schemes and the indices are compiled by the Pan-European Common Bird Monitoring scheme (PECBM: a joint project of the European Bird Census Council, the Royal Society for the Protection of Birds, BirdLife International, and Statistics Netherlands).

Domestic Material Consumption per capita

(tonnes per capita)

		1970	1975	1980	1985	1990	1995	1996	1997	1998	1999	2000	2001
EU-15	total	14.93	15.40	16.03	15.06	16.09	15.44	15.28	15.36	15.46	15.67	15.73	15.54
Biomass	food	1.23	1.27	1.34	1.35	1.33	1.25	1.37	1.37	1.36	1.39	1.38	1.31
	feed	1.83	1.91	1.96	2.00	1.84	1.73	1.77	1.79	1.80	1.80	1.79	1.74
	animals	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.03
	forestry	0.69	0.61	0.69	0.67	0.83	0.70	0.64	0.67	0.66	0.70	0.75	0.69
	non edible biomass	0.04	0.04	0.06	0.05	0.05	0.07	0.06	0.06	0.06	0.06	0.06	0.08
Minerals	construction minerals	5.85	6.27	6.44	5.70	6.87	7.06	6.79	6.83	6.89	7.08	7.03	6.97
	industrial minerals	0.35	0.35	0.37	0.39	0.37	0.33	0.35	0.32	0.36	0.35	0.35	0.35
	ores	0.73	0.69	0.64	0.56	0.58	0.58	0.49	0.51	0.54	0.54	0.63	0.58
Fossil fuels	coal	2.26	2.07	2.22	2.30	2.09	1.45	1.41	1.38	1.32	1.29	1.30	1.37
	crude oil	1.68	1.64	1.76	1.48	1.54	1.54	1.54	1.55	1.61	1.54	1.56	1.58
	natural gas	0.22	0.52	0.51	0.52	0.52	0.66	0.80	0.80	0.80	0.82	0.79	0.78
	other fossils	0.01	0.01	0.01	0.03	0.06	0.06	0.05	0.06	0.05	0.07	0.07	0.07

Data Source: Eurostat



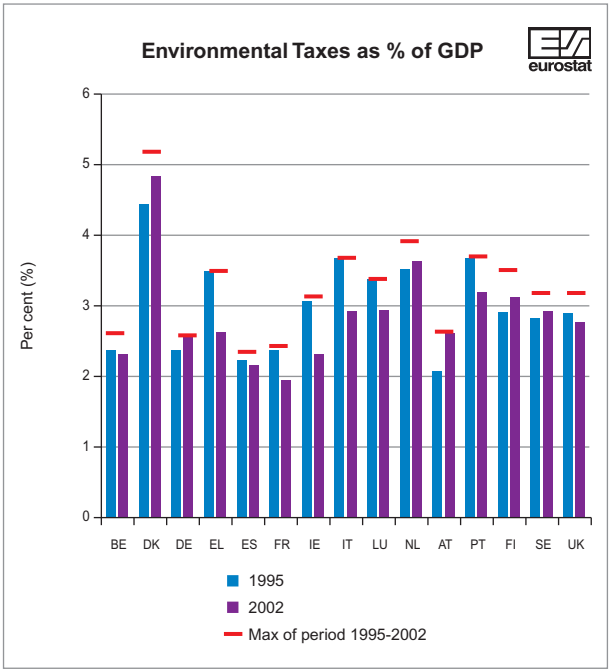
DMC (Domestic Material Consumption) is a measure of a country's resource usage. It comprises material extraction plus imports minus exports of fossil fuels, minerals and biomass. The table and graph show material consumption per capita in the EU-15 countries. Consumption is quite stable between 1970 and 2001. During the same period GDP per capita at constant prices has gone up by 2.1 times. This shows a decoupling of resource use from economic growth, through significantly improved resource efficiency and dematerialisation of the economy.

Environmental Taxes as % of GDP

	1990	1991	1992	1993	1994	1995*	1996	1997	1998	1999	2000	2001	2002
EU-15						**2.76**	**2.77**	**2.75**	**2.77**	**2.85**	**2.74**	**2.67**	**2.64**
BE	1.76	1.78	1.96	2.27	2.32	2.36	2.60	2.61	2.54	2.55	2.37	2.37	2.34
DK			2.29	2.18	2.68	4.44	4.67	4.68	5.11	5.17	4.75	4.70	4.84
DE		2.21	2.36	2.34	2.48	2.39	2.25	2.20	2.16	2.32	2.42	2.57	2.56
EL						3.49	3.45	3.44	3.25	3.07	2.63	2.86	2.62
ES						2.23	2.23	2.16	2.32	2.36	2.14	2.05	2.17
FR						2.37	2.41	2.33	2.32	2.35	2.13	1.97	1.98
IE	1.47	3.32	3.26	3.13	3.31	3.08	3.14	3.03	3.02	3.00	2.93	2.37	2.32
IT	3.28	3.69	3.70	3.64	3.64	3.68	3.55	3.53	3.41	3.56	3.25	3.09	2.94
LU		2.39	3.07	3.35	3.68	3.38	3.30	3.13	2.99	2.97	2.87	2.88	2.95
NL						3.51	3.74	3.70	3.76	3.92	3.90	3.78	3.65
AT						2.05	2.26	2.38	2.29	2.31	2.42	2.61	2.62
PT						3.66	3.69	3.47	3.65	3.61	3.06	3.10	3.18
FI	2.15	2.07	2.27	2.51	2.78	2.94	3.12	3.34	3.32	3.48	3.18	3.04	3.13
SE						2.82	3.16	2.99	3.03	2.89	2.81	2.85	2.97
UK	2.70	2.80	2.72	2.73	2.84	2.94	2.96	2.97	3.14	3.17	3.06	2.83	2.77

* Break in time series following European System of Accounts (ESA95)

Data Source: Eurostat



Environmental taxes are a market-based instrument that aims to integrate the cost of adverse environmental impacts into prices. Through them, producers and consumers are given an incentive to assess the environmental consequences of their behaviour in their production and consumption decisions and thus encouraged to limit environmental pressures and use natural resources responsibly. However, environmental interests also have to be weighed against other concerns, such as competitiveness, regional policy and employment. Levels of environmental tax are therefore adjusted to reflect these other concerns. Between 1995 and 2002, revenues from environmental taxes relative to GDP decreased for the majority of EU-15 countries, with about 4 percent for EU-15 in total. The largest decrease is seen in Greece with about 26 percent between 1995 and 2002. Austria, on the other hand, increased its share in the same time-period to about 28 percent of GDP.

Annex A: Glossary of Terms used in the Energy and Environment sections

Acidifying substances:

The acidifying substances considered in this publication are sulphur dioxide (SO_2) and nitrogen oxide (NOx) and ammonia (NH_3). Emissions of these gases are associated with the formation of acid rain. By the year 2010 at the latest, Member States shall limit their annual national emissions of these pollutants (National Emission Ceilings Directive 2001/81/EC[1]).

Acid Equivalent:

In the concept of acid equivalents weighting factors are used to aggregate the emissions of acidifying substances and present a single figure for this in acid equivalents. They represent an oversimplified approach to a very complex process of chemical interactivity. Acid equivalents are estimated as follows: sulphur dioxide * 1/32; nitrogen oxides * 1/46 and ammonia * 1/17 (de Leeuw 2002[2]).

CHP:

See "Combined Heat and Power"

CO_2 Equivalent:

Emissions of some substances resulting from burning of fossil fuels and other activities like industrial processes or agriculture significantly change the composition of the atmosphere and cause the anthropogenic greenhouse effect: carbon dioxide (CO_2), methane (CH_4) and nitrous oxide (N_2O) and hydrofuorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6). These substances have individual global warming potentials (GWP) ranging from 1 (CO_2) to 23 900 (SF_6). HFCs and PFCs comprise a large number of different gases that have different GWPs (IPCC, 1996[3]). In order to aggregate the emissions of the different substances and present a single figure for the climate change issue they are expressed in CO_2 equivalents.

Cogeneration:

See "Combined Heat and Power"

Combined Heat and Power:

A combined heat and power (also referred to as a cogeneration or a CHP) unit is an installation in which heat energy released from fuel is transmitted to electrical generator sets which are designed and operated in such a way that energy is partly used for generating electrical energy and partly for supplying heat for various purposes. The thermal efficiency of a combined heat and power unit is significantly higher than that of a unit producing electricity only.

Constant Price:

The constant price of a commodity is its price considered in constant terms, taking account of inflation.

Current Price:

The current (or nominal) price of a commodity is its price considered in current terms, without taking account of inflation.

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[1] Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants

[2] de Leeuw, 2002: A set of emission indicators for long-range transboundary air pollution. Environmental Science & Policy, 5, 135-145

[3] IPCC (1996) Climate Change 1995: The Science of Climate Change. Intergovernmental Panel on Climate Change; J.T. Houghton, L.G. Meira Filho, B.A. Callander, N. Harris, A. Kattenberg, and K. Maskell, eds.; Cambridge University Press. Cambridge, U.K.

Energy Dependency:
Energy dependency shows the extent to which a country relies upon imports in order to meet its energy needs. It is calculated using the following formula: net imports / (gross inland consumption + bunkers).

Energy Intensity:
Energy intensity gives an indication of the effectiveness with which energy is being used to produce added value. It is defined as the ratio of Gross Inland Consumption of energy to Gross Domestic Product.

Environmental Protection Investments
Capital expenditures for new or adaptation of existing methods, technologies, processes, equipment (or parts thereof) designed to prevent or reduce the amount of pollution created at the source (e.g. air emissions, effluents or solid waste), thereby reducing the environmental impacts associated with the release of pollutants and/or with polluting activities.

Environmental taxes
An environmental tax is defined as a tax on an environmentally harmful tax base. The concept consists of the revenues from four types of taxes: energy-, transport-, pollution- and resource taxes. Carbon dioxide taxes are included under energy as they are often an integral part of general energy taxes. Excluded are general Value Added Tax (VAT) on environmentally harmful tax bases as well as royalty payments and other special taxes related to oil and gas extraction.

Final Energy Consumption:
Final energy consumption is the energy finally consumed in the transport, industrial, commercial, agricultural, public and household sectors. It excludes deliveries to the energy transformation sector and to the energy industries themselves.

GCV:
See “Gross Calorific Value”

GDP:
See “Gross Domestic Product”

Global Warming Potential (GWP):
The global warming potential is the estimated potential of a greenhouse gas contributing to global warming in the atmosphere. It is based on its effect over a 100-year time horizon. For example, the GWP of methane is estimated to be 21 times higher than GWP of CO_2 that was set to 1 (IPCC, 1996[4]).

Greenhouse Gases (GHG):
The greenhouse gas (GHG) emissions in the EU member states are reported under 1992 United Nations Framework Convention on Climate Change and the Decision 280/2004/EC[5]. According to the Kyoto Protocol under the United Nations Framework Convention on Climate Change anthropogenic emissions of the six greenhouse gases (the ‘Kyoto basket’) are aggregated using the global warming potential: carbon dioxide (CO_2),

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[4] IPCC (1996) Climate Change 1995: The Science of Climate Change. Intergovernmental Panel on Climate Change; J.T. Houghton, L.G. Meira Filho, B.A. Callander, N. Harris, A. Kattenberg, and K. Maskell, eds.; Cambridge University Press. Cambridge, U.K.

[5] Decision No 280/2004/EC of the European Parliament and of the Council of 11 February 2004 concerning a mechanism for monitoring Community greenhouse gas emissions and for implementing the Kyoto Protocol.

methane (CH_4) and nitrous oxide (N_2O) and hydrofuorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF_6). In the first quantified emission limitation and reduction commitment period, from 2008 to 2012, the EU has agreed to an 8% reduction in its greenhouse gas emissions compared to 1990. Within this overall target, differentiated emission limitation targets have been agreed for each Member State under an EU-15 accord known as the 'burden-sharing' agreement (Council Decision 2002/358/EC[6].

Gross Calorific Value:

The gross calorific value (GCV) is the total amount of heat released by a unit quantity of fuel, when it is burned completely with oxygen, and when the products of combustion are returned to ambient temperature. This quantity includes the heat of condensation of any water vapour contained in the fuel and of the water vapour formed by the combustion of any hydrogen contained in the fuel.

Gross Domestic Product:

The gross domestic product (GDP) is the value of the output of all goods and services produced within the borders of a country.

Gross Inland Consumption:

Gross inland consumption is the quantity of energy consumed within the borders of a country. It is calculated using the following formula: primary production + recovered products + imports + stock changes – exports – bunkers (i.e. quantities supplied to sea-going ships).

Hard Coal and Derived Products:

Hard coal and derived products include hard coal, patent fuels, hard coke, gasworks coke and coal semi-coke.

Intergovernmental Panel on Climate Change (IPCC) source and sink categories

The IPCC nomenclature (IPCC 1997[7]) is developed for reporting under the UN Framework Climate Change Convention. The sources categories in the highest aggregated IPCC levels are the following:

1 Energy (1 A Fuel Combustion Activities and 1 B Fugitive Emissions from Fuels)
2 Industrial Processes
3 Solvent and Other Product Use
4 Agriculture
5 Land-Use Change & Forestry
6 Waste
7 Other

Please, note that the fuel combustion for energy use in the industry and in the agriculture as well as the waste incineration with energy use - all these emissions count to the IPCC source and sink categories "Energy".

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[6] Council Decision 2002/358/EC of 25 April 2002 concerning the approval, on behalf of the European Community, of the Kyoto Protocol to the United Nations Framework Convention on Climate Change and the joint fulfilment of commitments thereunder.

[7] IPCC 1997: Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories J.T. Houghton, L.G. Meira Filho, B. Lim, K. Treanton, I. Mamaty, Y. Bonduki, D.J. Griggs and B.A. Callender (Eds) IPCC/OECD/IEA. UK Meteorological Office, Bracknell.

Lignite and Derived Products:
Lignite and derived products include lignite, peat, brown coal briquettes and peat briquettes.

Natural Gas:
Natural gas occurs in natural underground deposits, and may or may not be associated with oil deposits. It contains essentially methane, but also small proportions of other gases. It also covers methane recovered in coal mines.

NCV:
See “Net Calorific Value”

Net Calorific Value:
The net calorific value (NCV) is the amount of heat released by a unit quantity of fuel, when it is burned completely with oxygen, and when the products of combustion are returned to ambient temperature. This quantity does not include the heat of condensation of any water vapour contained in the fuel nor of the water vapour formed by the combustion of any hydrogen contained in the fuel.

Nitrogen oxides (NOx):
Nitrogen oxides (NOx) mean nitric oxide and nitrogen dioxide, expressed as nitrogen dioxide.

NCV:
See “Net Calorific Value”

NMVOC (Volatile organic compounds without methane) equivalents:
The emissions of ozone precursors can be aggregated using their ozone forming potential and can be expressed in NMVOC equivalents. This represents an oversimplified approach to a very complex process of chemical interactivity. The following weighting factors are applied to estimate the emissions in NMVOC equivalents: nitrogen oxides=1.22, volatile organic compounds without methane=1, carbon monoxide=0.11, methane=0.014 (de Leeuw 2002[8]).

Power Station Efficiency:
The efficiency of a thermal or nuclear power station is defined as the ratio between the output, i.e. the gross electricity generated, and the fuel input. In the case of a combined heat and power installation the output is the gross electricity generated plus the heat produced.

Primary Energy Production:
Primary energy production is the extraction of energy from a natural source. The precise definition depends on the fuel involved:

> *Hard coal, lignite:* Quantities of fuels extracted or produced, calculated after any operation for removal of inert matter. In general, production includes the quantities consumed by the producer during the production process (e.g. for heating or operation of equipment and auxiliaries) as well as any quantities supplied to other on-site producers of energy for transformation or other uses.

[8] de Leeuw, 2002: A set of emission indicators for long-range transboundary air pollution. Environmental Science & Policy, 5, 135-145.

Crude oil: Quantities of fuels extracted or produced within national boundaries, including off-shore production. Production includes only marketable production, and excludes any quantities returned to formation. Production includes all crude oil, natural gas liquids (NGL), condensates and oil from shale and tar sands, etc.

Natural gas: Quantities of dry gas, measured after purification and extraction of natural gas liquids and sulphur. The production includes only marketable production, and excludes any quantities re-injected, vented and flared, and any extraction losses. The production includes all quantities used within the natural gas industry, in gas extraction, pipeline systems and processing plants.

Nuclear heat: Quantities of heat produced in a reactor. Production is the actual heat produced or the heat calculated on the basis of the gross electricity generated and the thermal efficiency of the nuclear plant.

Hydropower, Wind energy, Solar photovoltaic energy: Quantities of electricity generated. Production is calculated on the basis of the gross electricity generated and a conversion factor of 3 600 kJ/kWh.

Geothermal energy: Quantities of heat extracted from geothermal fluids. Production is calculated on the basis of the difference between the enthalpy of the fluid produced in the production borehole and that of the fluid disposed of via the re-injection borehole.

Biomass / Wastes: In the case of municipal solid wastes (MSW), wood, wood wastes and other solid wastes, production is the heat produced after combustion and corresponds to the heat content (NCV) of the fuel.

In the case of anaerobic digestion of wet wastes, production is the heat content (NCV) of the biogases produced. The production includes all quantities of gas consumed in the installation for the fermentation processes, and excludes all quantities of flared gases.

In the case of biofuels, the production is the heat content (NCV) of the fuel.

RES:
See “Renewable Energy”

Renewable Energy:
Renewable energy includes hydroelectricity, biomass, wind, solar, tidal and geothermal energies.

Tropospheric Ozone Precursors (TOP):
The ozone precursors considered in this publication are nitrogen oxides (NOx), volatile organic compounds without methane (NMVOC), carbon monoxide (CO), and methane (CH_4). Emissions of these four gases are associated with the formation of tropospheric ozone (or ground-level ozone) which means ozone in the lowermost part of the troposphere. By the year 2010 at the latest, Member States shall limit their annual national emissions of these pollutants (National Emission Ceilings Directive 2001/81/EC [9]).

Tropospheric Ozone Forming Potential (TOFP):
The emissions of ozone precursors can be aggregated using the ozone forming potential of four gases (nitrogen oxides, volatile organic compounds without methane (NMVOC), carbon monoxide, methane) and presented in a single figure in kilotonnes NMVOC equivalents.

[9] Directive 2001/81/EC of the European Parliament and of the Council of 23 October 2001 on national emission ceilings for certain atmospheric pollutants.

Annex B: Terms and Methodology used in the Transport Section

The main terms used in the field of transport statistics are defined in the "Eurostat concepts and definitions database (CODED)" accessible under the Eurostat web site at
"http://forum.europa.eu.int/irc/dsis/coded/info/data/coded/en/Theme7.htm"

The indicators presented in the transport section of this pocket book represent a small part of the very detailed data collected by Eurostat in the framework of legal acts and voluntary data agreements.

According to a commonly agreed breakdown, the indicators are presented on the one hand by domains of interest (infrastructure, equipment, quantity and performance for the transport of freight and passengers, safety) and on the other hand, by modes of transport (rail, road, inland waterways, pipelines, maritime and aviation).

Most of the tables show figures covering a six-year period up to 2002. Data for up to 32 countries are included in this publication: members of the European Union (EU-15 or EU-25), of the European Free Trade Association (EFTA) and candidates for EU membership. A special focus has been made on a comparison between the transport activity of the fifteen Member States (EU-15) and the twenty five Member States (EU-25) of the European Union, due to the accession of ten new countries in 2004.

To facilitate the comparisons between smaller and bigger countries, most of the indicators combine basic transport figures with surface, population or Gross Domestic Product (GDP).

Eurostat's on-line database has been used as the main source for the indicators, while figures from the DG for Energy and Transport have been used as an additional source. For some missing data, figures from miscellaneous international or national bodies have been used and some estimates (put in italics) have been made.

Two main channels are used by Eurostat to collect statistical data:
1. Legal acts on transport statistics which cover detailed data collections for all the main modes of transport:

- Rail freight: Council Directive 80/1177/EEC of 4 December 1980 (O.J. L 350 of 23.12.1980) replaced by Regulation (EC) No 91/2003 of the European Parliament and of the Council of 16 December 2002 (rail freight, passengers, traffic and accidents) **(O.J. L 14 of 21.1.2003)**
- Road freight: Council Regulation (EC) 1172/98 of 25 May 1998 **(O.J. L 163 of 6.6.1998)**
- Inland waterways: Council Directive 80/1119/EEC of 17 November 1980 **(O.J. L 339 of 15.12.1980)**
- Maritime freight, passengers and traffic: Council Directive 95/64/EC of 8 December 1995 **(O.J. L 320 of 30.12.1995)**
- Aviation passengers, freight and traffic: Regulation (EC) No 437/2003 of the European Parliament and of the Council of 27 February 2003 **(O.J. L 66 of 11.3.2003)**
- Road accidents: Council Decision 93/704/EC of 30 November 1993 **(O.J. L 329 of 30.12.1993)**

2. The so called "Common Questionnaire" of Eurostat, UNECE and ECMT, which is used to collect, on a voluntary basis, annual aggregated data covering many aspects of inland modes of transport (rail, road, inland waterways and pipelines). Other voluntary agreements cover the collection of other types of data such as regional transport indicators.

The main dissemination channel used for Eurostat data is the on-line database which covers, from the early eighties, millions of transport figures from EU countries plus, to a lesser extent, statistics from EFTA, Mediterranean and Candidate countries. Some miscellaneous publications in paper and electronic formats are also available, such as the "Panorama of transport" and several "Statistics in Focus".

Annex C: Methodology for the calculation of EU-wide average fuel prices

Electricity

Electricity prices are collected by Eurostat from the Member States of EU based on the principles of Directive 90/377/EEC for Price Transparency. The prices are as of 1 January in the year shown. Prices are collected at a variety of locations in each country or at national level and for a number of different consumers. For *domestic* prices, the standard consumer used in this publication is *Dd* - one with an annual consumption of 7 500 kWh which corresponds to a standard dwelling of 100m^2 with 4-5 rooms plus a kitchen. For *industrial* prices, the standard consumer used in this publication is *Ig* - one with an annual consumption of 24 GWh and a maximum demand of 4 000 kW. More detailed information on the collection of electricity prices can be found in Eurostat's Electricity Prices publication.

The average price in each country is calculated as the median of the prices in the various locations. The average EU price is then calculated by taking a weighted average of the prices in individual countries. *Domestic* prices are weighted by the final energy consumption of electricity in households recorded annually by Eurostat. *Industrial* prices are weighted by the final energy consumption of electricity in industry recorded by the same survey. Since price data are available for 2003 and 2004 but consumption data is not, the prices for 2003 and 2004 have been weighted by 2002 consumption; this should have only a small effect on the EU average.

The survey collects prices all taxes included, prices without VAT and prices all taxes excluded. The *domestic* prices shown here are prices all taxes included while *industrial* prices are shown without VAT (i.e. what industry will actually pay for the electricity).

Natural gas

Natural gas prices are collected by Eurostat on a similar basis to electricity prices following the same regulation. Again, the prices are as of 1st January in the year shown. The EU averages are also calculated in the same way albeit using different standard consumers and different consumption measures to weight the country prices. For *domestic* consumers, the standard consumer used in this publication is D3 (annual consumption of 83.70 GJ i.e. 23 260 kWh) while for *industrial* consumers it is I4-1 (annual consumption of 418 600 GJ i.e. 116.30 GWh). More detailed information on the collection of natural gas prices can be found in Eurostat's Gas Prices publication.

The average price in each country is calculated as the median of the prices in the various locations. The average EU price is then calculated by taking a weighted average of the prices in individual countries. *Domestic* natural gas prices are weighted by final energy consumption of gas in households while *industrial* prices are weighted by final consumption in industry. Since price data are available for 2003 and 2004 but consumption data is not, the prices for 2003 and 2004 have been weighted by 2002 consumption; this should have only a small effect on the EU average.

The survey collects prices all taxes included, prices without VAT and prices all taxes excluded. The *domestic* prices shown here are prices all taxes included while *industrial* prices are shown without VAT (i.e. what industry will actually pay for the energy).

Petroleum products

The heating gas oil, residual fuel oil, unleaded gasoline and automotive diesel prices are supplied to DG-TREN of the Commission by the Member States as those being the most representative price levels actually charged to consumers for the specific categories of sale listed below. This data collection is based on Council Decision 1999/280/EC and Commission Decision 1999/566/EC. The prices given are as of 15thJanuary in each year.

The heating gas oil prices given are for deliveries of between 2 000 and 5 000 litres while those for residual fuel oil are for monthly deliveries of less than 2 000 tonnes or annual deliveries of less than 24 000 tonnes. Average pump prices are given for unleaded gasoline and automotive diesel fuel.

The EU average prices are calculated by weighting the prices from each country by the final energy consumption of heating gas oil in households, of residual fuel oil in industry and of the two automotive fuels (separately) in transport for the respective products. Since price data are available for 2003 and 2004 but consumption data is not (with the exception of unleaded gasoline for which consumption figures are available also for 2003), the prices for 2003 and 2004 have been weighted by 2002 consumption (with the exception of prices for unleaded gasoline in 2004 which have been weighted by 2003 consumption); this should have only a small effect on the EU average.

Annex D: Calorific Values and Conversion Factors

Calorific Values

		kJ (NCV)	kgoe (NCV)
Hard coal	1 kg	17 200 - 30 700	0.411 - 0.733
Recovered hard coal	1 kg	13 800 - 28 300	0.330 - 0.676
Patent fuels	1 kg	26 800 - 31 400	0.640 - 0.750
Hard coke	1 kg	28 500	0.681
Brown coal	1 kg	5 600 - 10 500	0.134 - 0.251
Black lignite	1 kg	10 500 - 21 000	0.251 - 0.502
Peat	1 kg	7 800 - 13 800	0.186 - 0.330
Brown coal briquettes	1 kg	20 000	0.478
Tar	1 kg	37 700	0.900
Benzol	1 kg	39 500	0.943
Oil equivalent*	1 kg	41 868	1
Crude oil	1 kg	41 600 - 42 800	0.994 - 1.022
Feedstocks	1 kg	42 500	1.015
Refinery gas	1 kg	50 000	1.194
LPG	1 kg	46 000	1.099
Motor spirit	1 kg	44 000	1.051
Kerosenes, jet fuels	1 kg	43 000	1.027
Naphtha	1 kg	44 000	1.051
Gas diesel oil	1 kg	42 300	1.010
Residual fuel oil	1 kg	40 000	0.955
White spirit, industrial spirit	1 kg	44 000	1.051
Lubricants	1 kg	42 300	1.010
Bitumen	1 kg	37 700	0.900
Petroleum cokes	1 kg	31 400	0.750
Others petroleum products (paraffins, waxes, etc.)	1 kg	30 000	0.717
Natural gas	1 MJ (GCV)	900	0.0215
Coke-oven gas	1 MJ (GCV)	900	0.0215
Blast-furnace gas	1 MJ (GCV)	1 000	0.0239
Works gas	1 MJ (GCV)	900	0.0215
Nuclear energy	1 MJ (GCV)	1 000	0.0239
Biomass	1 MJ (GCV)	1 000	0.024
Solar energy	1 MJ (GCV)	1 000	0.024
Geothermal energy	1 MJ (GCV)	1 000	0.024
Hydro energy	1 kWh	3 600	0.086
Wind energy	1 kWh	3 600	0.086
Derived heat	1 MJ (GCV)	1 000	0.024
Electrical energy	1 kWh	3 600	0.086

* The tonne of oil equivalent is a conventional standardised unit defined on the basis of a tonne of oil with a net calorific value of 41 868 kilojoules/kg. The conversion coefficients from the specific units to kgoe (kilogramme of oil equivalent) are thus computed by dividing the conversion co-efficients to the kilojoules by 41 868.

The following prefixes are used for multiples of toe, joules, watts and watt hours:

kilo (k)	=	1 000	or	10^3
mega (M)	=	1 000 000	or	10^6
giga (G)	=	1 000 000 000	or	10^9
tera (T)	=	1 000 000 000 000	or	10^{12}
peta (P)	=	1 000 000 000 000 000	or	10^{15}

Conversion Factors

Energy	*To*	***TJ***	***Gcal***	***Mtoe***	***MBtu***	***GWh***
From						
TJ		1	238.8	2.388×10^{-5}	947.8	0.2778
Gcal		4.1868×10^{-3}	1	1×10^{-7}	3.968	1.163×10^{-3}
Mtoe		4.1868×10^{4}	1×10^{7}	1	3.968×10^{7}	11 630
Mbtu		1.0551×10^{-3}	0.252	2.52×10^{-8}	1	2.931×10^{-4}
GWh		3.6	860	8.6×10^{-5}	3 412	1