



Evaluation Tables of the Energy Balace for Germany

Energy data for the years 1990 to 2024

Last update: September 2025 (final results up to 2023)

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Preliminary notes on the evaluation tables of the German Energy Balance:

This publication summarizes the most important data of the energy balances since 1990 in the form of aggregated time series. Especially for the reader, who is not interested in detailed energy balances of each year, we give a well-founded overview of the energy statistical development in Germany. It is to be considered, that the data for the most recent year are provisional.

Since 1995 the AG Energiebilanzen applies the physical energy content method for energy balances. This method assumes a 33 % efficiency of nuclear electricity generation, i.e. the input of primary energy is three times as high as the electricity generation. Electricity generation from renewable energy without fuel consumption (hydro, wind, photovoltaics) is calculated with 100 % efficiency. Until 1994 the primary energy consumption of these energy carriers was calculated by the average fuel input in conventional power plants (according to the former "substitution method"). However, all data in this publication are calculated by the physical energy content method.

The structure of this data collection is similar to the structure of the energy balances. It begins with primary energy production and foreign trade (section 1). Section 2 presents an overview of primary energy consumption by energy carriers and the structure of the energy consumption by sectors. The importance of renewable energy is illustrated in section 3. Section 4 shows the fuel input for electricity generation. Combined heat and power generation (CHP) is considered in more detail in section 5. Section 6 provides detailed tables on the development of the final energy consumption by energy carriers and sectors. Furthermore, section 7 illustrates the development of important energy efficiency indicators. In the annex, the classification of energy carriers considered in this publication is compared to the more detailed classification in the energy balances.

The following tables present also data that are not shown in this form in the energy balance. This is especially true for the presentation of CHP, a technology that concerns different energy conversion and consumption sectors of the energy balance. The fuel input for CHP electricity generation is shown in the conversion sector ("Public thermal power station", "Industrial power station" or "Hydro, wind, photovoltaic and other power stations"). However, the fuel input for CHP heat generation is shown in the conversion sector "Public cogeneration plants" only if it serves district heating. The fuel input for heat generation in CHP plants of the industry is included in the final energy consumption. The heat generated in these plants cannot be seen in the energy balance. The same applies to CHP plants of other auto-producers (less than 1 MW). Hence, the schema of the energy balance alone cannot show the full importance of CHP. Therefore, additional data on energy input and generation of heat and power in CHP plants are shown in section 5.

In 2023, the energy balances were subjected to a complete revision, starting with the year 2003 up to the current edge. All areas of the energy balance were carefully analyzed, new findings were incorporated and errors were corrected. Further information can be found in the infoplus information service of the AG Energiebilanzen, available at: <https://ag-energiebilanzen.de/presse/infoplus/>.

In 2025, another regular, complete revision was carried out, starting with the year 2003 up to the current edge. Once again, all areas of the energy balance were carefully analyzed, new findings were incorporated and errors were corrected.

Additional information on the German Energy Balance:

The evaluation tables were compiled on behalf of AG Energiebilanzen by

- **Energy Environment Forecast & Analysis (EEFA, www.eefa.de),**
- **Zentrum für Sonnenenergie- und Wasserstoff-Forschung Baden-Württemberg (ZSW, www.zsw-bw.de)**

The data are based on the published German Energy Balances (if not explicitly stated otherwise).

Commencing with the balance year 2018, the Federal Ministry for Economic Affairs and Energy stipulated in conjunction with the renewed assignment of the AG Energiebilanzen to prepare the energy balances for Germany that it incorporates the relevant data on renewables which are ascertained by the Working Group on Renewable Energies-Statistics (AGEE-Stat) under the auspices of the Federal Environment Agency (UBA) directly into the energy balances to be established by AGEB.

When it comes to renewables, AGEE-Stat had been an important data source for AGEB already in the past. The fact that original official statistics which could be adopted directly are generally not available for renewables prompts us to make individual estimates of the respective consumption values for whom it is often necessary to rely on specific in-house model calculations which have been specifically developed for this purpose. This applies to both AGEB and AGEE-Stat. It is therefore understandable that different approaches are taken by the model-based estimates of both institutions which do not necessarily lead to the same results.

Nevertheless, it seemed to be advisable to refer to a single data source in order to avoid any divergences which would be hard to explain to the public. When it comes to renewables, AGEE-Stat will, thus, be responsible for the respective data in the energy balance as well as in the requisite derivable evaluations starting with the balance year 2018. This already applies to the tabular information on renewable energy carriers included in this energy report.

1.1 Indigenous energy production by energy source

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Indigenous energy production by energy source in PJ																																				
Hard coal	PJ	2,089	1,980	1,957	1,735	1,557	1,595	1,434	1,391	1,234	1,194	1,012	825	790	777	784	756	641	651	521	415	387	361	324	229	230	185	115	108	75	0	0	0	0	0	
Lignite	PJ	3,142	2,462	2,129	1,939	1,830	1,711	1,661	1,573	1,485	1,453	1,528	1,612	1,653	1,641	1,660	1,611	1,591	1,628	1,576	1,529	1,535	1,595	1,676	1,660	1,617	1,608	1,544	1,540	1,506	1,190	979	1,153	1,193	916	826
Petroleum	PJ	156	149	140	131	124	125	121	120	123	116	131	140	152	162	150	152	150	145	130	119	107	114	112	112	104	103	100	94	88	82	81	77	72	70	69
Gases	PJ	575	569	578	576	603	621	671	660	643	687	649	654	656	686	636	606	633	623	551	546	464	459	405	389	312	290	278	255	208	200	172	172	159	141	139
Natural gas, Petroleum gas	PJ	563	556	564	561	588	607	657	646	631	674	638	644	642	668	618	588	611	604	537	534	452	447	391	374	300	280	266	246	201	194	163	165	153	135	133
Renewable Energy Sources	PJ	200	200	210	230	255	275	270	344	379	404	417	432	455	577	669	756	923	1,080	1,131	1,132	1,304	1,360	1,513	1,567	1,577	1,684	1,688	1,802	1,842	1,937	1,965	1,985	2,070	2,085	2,121
Other energy sources	PJ	62	0	0	0	0	0	0	0	0	0	56	51	43	137	168	137	139	158	188	219	239	244	225	201	213	210	223	222	215	217	205	214	212	203	202
Total	PJ	6,224	5,359	5,014	4,610	4,370	4,328	4,157	4,089	3,865	3,854	3,793	3,714	3,750	3,980	4,066	4,018	4,077	4,285	4,097	3,960	4,036	4,134	4,255	4,158	4,053	4,079	3,948	4,021	3,935	3,626	3,402	3,601	3,707	3,414	3,357
Indigenous energy production by energy source in mill. tce																																				
Hard coal	mill. tce	71.3	67.6	66.8	59.2	53.1	54.4	48.9	47.5	42.1	40.7	34.5	28.1	27.0	26.5	26.7	25.8	21.9	22.2	17.8	14.1	13.2	12.3	11.1	7.8	7.8	6.3	3.9	3.7	2.6	0.0	0.0	0.0	0.0	0.0	0.0
Lignite	mill. tce	107.2	84.0	72.6	66.1	62.5	58.4	56.7	53.7	50.7	49.6	52.1	55.0	56.4	56.0	56.6	55.0	54.3	55.5	53.8	52.2	52.4	54.4	57.2	56.6	55.2	54.9	52.7	52.5	51.4	40.6	33.4	39.3	40.7	31.3	28.2
Petroleum	mill. tce	5.3	5.1	4.8	4.5	4.2	4.3	4.1	4.1	4.2	4.0	4.5	4.8	5.2	5.5	5.1	5.2	5.1	5.0	4.4	4.1	3.7	3.9	3.8	3.8	3.5	3.5	3.4	3.2	2.8	2.8	2.6	2.5	2.4	2.4	2.4
Gases	mill. tce	19.6	19.4	19.7	19.6	20.6	21.2	22.9	22.5	22.0	23.4	22.1	22.3	22.4	23.4	21.7	20.7	21.6	21.3	18.8	18.6	15.8	15.7	13.8	13.3	10.6	9.9	9.5	8.7	7.1	6.8	5.9	5.9	5.4	4.8	4.7
Natural gas, Petroleum gas	mill. tce	19.2	19.0	19.2	19.1	20.1	20.7	22.4	22.0	21.5	23.0	21.8	22.0	21.9	22.8	21.1	20.1	20.8	20.6	18.3	18.2	15.4	15.2	13.3	12.8	10.2	9.5	9.1	8.4	6.9	6.6	5.6	5.6	5.2	4.6	4.5
Renewable Energy Sources	mill. tce	6.8	6.8	7.2	7.9	8.7	9.4	9.2	11.8	12.9	13.8	14.2	14.7	15.5	19.7	22.8	25.8	31.5	36.9	38.6	38.6	44.5	46.4	51.6	53.5	53.8	57.5	57.6	61.5	62.9	66.1	67.0	67.7	70.6	71.1	72.4
Other energy sources	mill. tce	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.8	1.5	4.7	5.7	4.7	4.8	5.4	6.4	7.5	8.2	8.3	7.7	6.9	7.3	7.2	7.6	7.6	7.3	7.4	7.0	7.3	7.3	6.9	6.9
Total	mill. tce	212.4	182.8	171.1	157.3	149.1	147.7	141.8	139.5	131.9	131.5	129.4	126.7	128.0	135.8	138.8	137.1	139.1	146.2	139.8	135.1	137.7	141.0	145.2	141.9	138.3	139.2	134.7	137.2	134.3	123.7	116.1	122.9	126.5	116.5	114.5
Indigenous energy production by energy source in %																																				
Hard coal	%	33.6	36.9	39.0	37.6	35.6	36.9	34.5	34.0	31.9	31.0	26.7	22.2	21.1	19.5	19.3	18.8	15.7	15.2	12.7	10.5	9.6	8.7	7.6	5.5	5.7	4.5	2.9	2.7	1.9	0.0	0.0	0.0	0.0	0.0	0.0
Lignite	%	50.5	45.9	42.5	42.1	41.9	39.5	39.9	38.5	38.4	37.7	40.3	43.4	44.1	41.2	40.8	40.1	39.0	38.0	38.5	38.6	38.0	38.6	39.4	39.9	39.9	39.4	39.1	38.3	38.3	32.8	28.8	32.0	32.2	26.8	24.6
Petroleum	%	2.5	2.8	2.8	2.8	2.8	2.9	2.9	2.9	3.2	3.0	3.5	3.8	4.0	4.1	3.7	3.8	3.7	3.4	3.2	3.0	2.7	2.8	2.6	2.7	2.6	2.5	2.5	2.3	2.2	2.3	2.4	2.1	2.0	2.0	2.1
Gases	%	9.2	10.6	11.5	12.5	13.8	14.4	16.1	16.2	16.6	17.8	17.1	17.6	17.5	17.2	15.6	15.1	15.5	14.5	13.4	13.8	11.5	11.1	9.5	9.4	7.7	7.1	7.0	6.3	5.3	5.5	5.1	4.8	4.3	4.1	4.1
Natural gas, Petroleum gas	%	9.1	10.4	11.2	12.2	13.5	14.0	15.8	15.8	16.3	17.5	16.8	17.3	17.1	16.8	15.2	14.6	15.0	14.1	13.1	13.5	11.2	10.8	9.2	9.0	7.4	6.9	6.7	6.1	5.1	5.4	4.8	4.6	4.1	4.0	4.0
Renewable Energy Sources	%	3.2	3.7	4.2	5.0	5.8	6.3	6.5	8.4	9.8	10.5	11.0	11.6	12.1	14.5	16.4	18.8	22.6	25.2	27.6	28.6	32.3	32.9	35.6	37.7	38.9	41.3	42.8	44.8	46.8	53.4	57.8	55.1	55.8	61.1	63.2
Other energy sources	%	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.4	1.2	3.4	4.1	3.4	3.4	3.7	4.6	5.5	5.9	5.9	5.3	4.8	5.3	5.1	5.6	5.5	5.5	6.0	6.0	6.0	5.7	5.9	6.0
Total	%	100.0																																		
Indigenous energy production by energy source, changes compared to the previous year in %																																				
Hard coal	%	n/a	-5.2	-1.1	-11.4	-10.2	2.4	-10.1	-3.0	-11.3	-3.3	-15.2	-18.5	-4.2	-1.7	0.9	-3.6	-15.1	1.5	-19.9	-20.4	-6.7	-6.6	-10.3	-29.3	0.4	-19.8	-37.7	-6.2	-30.2	-100.0	0.0	0.0	0.0	0.0	
Lignite	%	n/a	-21.7	-13.5	-8.9	-5.6	-6.5	-3.0	-5.3	-5.6	-2.1	5.1	5.5	2.6	-0.8	1.2	-3.0	-1.2	2.3	-3.1	-3.0	0.4	3.9	5.1	-1.0	-2.6	-0.6	-3.9	-0.3	-2.2	-21.0	-17.7	17.8	3.4	-23.2	-9.9
Petroleum	%	n/a	-4.7	-5.7	-6.8	-4.8	1.0	-3.6	-1.0	2.9	-5.6	13.0	6.5	8.6	6.7	-7.5	1.5	-1.6	-2.9	-10.6	-8.3	-10.2	6.7	-2.4	0.6	-7.6	-1.0	-2.4	-5.9	-6.7	-6.9	-1.0	-5.4	-5.6	-4.0	-0.6
Gases	%	n/a	-1.1	1.7	-0.4	4.7	3.0	8.1	-1.6	-2.6	6.8	-5.5	0.8	0.2	4.7	-7.4	-4.7	4.4	-1.5	-11.6	-0.8	-15.1	-1.0	-11.9	-3.8	-19.9	-6.8	-4.4	-8.3	-18.1	-3.8	-14.1	-0.1	-7.4	-11.6	-1.6
Natural gas, Petroleum gas	%	n/a	-1.4	1.4	-0.5	4.9	3.1	8.3	-1.7	-2.3	6.8	-5.4	1.0	-0.3	4.1	-7.5	-5.0	3.9	-1.0	-11.2	-0.6	-15.4	-1.1	-12.5	-4.2	-19.9	-6.7	-5.1	-7.3	-18.4	-3.3	-15.8	0.8	-7.1	-11.6	-1.5
Renewable Energy Sources	%	n/a	0.1	5.0	9.8	10.8	7.7	-1.8	27.7	10.1	6.4	3.2	3.8	5.4	26.8	15.9	13.1	22.1	17.0	4.7	0.2	15.2	4.2	11.3	3.5	0.6	6.8	0.2	6.8	2.2	5.1	1.4	1.0	4.3	0.7	1.8
Other energy sources	%	n/a	-100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-9.0	-15.5	215.4	23.0	-18.5	1.5	13.3	19.1	16.5	9.0	2.0	-7.6	-10.6	5.9	-1.6	6.2	-0.4	-3.0	0.7	-5.4	4.7	-0.9	-4.4	-0.4
Total	%	n/a	-13.9	-6.4	-8.1	-5.2	-1.0	-4.0	-1.6	-5.5	-0.3	-1.6	-2.1	1.0	6.1	2.2	-1.2	1.5	5.1	-4.4	-3.3	1.9	2.4	2.9	-2.3	-2.5	0.7	-3.2	1.8	-2.1	-7.9	-6.2	5.9	2.9	-7.9	-1.7

1990 - 2023: final data, 2024: provisional data

Other energy sources: incl. nuclear energy (uranium mining until 1990)

1.2 Import by energy source

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Import by energy source in PJ																																					
Hard coal	PJ	445	489	494	429	508	492	551	670	778	816	954	1,098	1,098	1,171	1,210	1,135	1,366	1,406	1,364	1,115	1,385	1,429	1,457	1,613	1,555	1,544	1,634	1,411	1,292	1,179	869	1,131	1,228	912	786	
Lignite	PJ	59	64	60	53	48	39	40	38	34	35	30	34	15	3	2	2	4	3	3	3	2	2	1	2	2	1	1	1	1	1	1	1	1	1	1	
Petroleum	PJ	5,692	6,051	6,503	6,528	6,553	6,141	6,360	6,329	6,570	6,160	6,231	6,348	6,035	6,065	6,151	6,292	6,247	5,776	5,968	5,579	5,484	5,242	5,350	5,470	5,405	5,512	5,547	5,629	5,348	5,458	5,004	5,030	5,275	4,837	5,045	
Gases	PJ	1,791	1,895	1,978	2,108	2,212	2,322	2,634	2,567	2,511	2,639	2,676	2,663	2,765	2,947	3,166	3,311	3,272	3,046	3,192	3,083	3,307	3,154	3,110	3,440	3,163	3,607	3,597	4,019	5,761	5,571	5,474	5,436	4,737	3,213	2,864	
Natural gas, Petroleum gas	PJ	1,791	1,895	1,978	2,108	2,212	2,322	2,634	2,567	2,511	2,639	2,676	2,663	2,765	2,947	3,166	3,311	3,272	3,046	3,192	3,083	3,307	3,154	3,110	3,440	3,163	3,607	3,597	4,019	5,761	5,571	5,474	5,436	4,737	3,213	2,864	
Renewable Energy Sources	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	19	23	44	70	76	67	64	85	96	86	96	96	90	80	81	101	89	140	108	108	106	87	
Other energy sources	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electricity	PJ	115	112	104	122	133	143	135	137	138	146	162	167	166	177	173	205	174	165	150	151	155	184	167	141	146	133	102	100	114	144	173	186	178	250	294	
Nuclear energy	PJ	1,606	1,609	1,733	1,675	1,650	1,682	1,764	1,859	1,764	1,855	1,851	1,868	1,798	1,801	1,822	1,779	1,826	1,533	1,623	1,472	1,533	1,178	1,085	1,061	1,060	1,001	923	833	829	819	702	754	379	79	0	
Total	PJ	9,708	10,220	10,872	10,915	11,105	10,819	11,484	11,600	11,796	11,653	11,904	12,179	11,877	12,181	12,549	12,768	12,960	12,005	12,368	11,467	11,951	11,284	11,256	11,824	11,426	11,889	11,884	12,074	13,446	13,261	12,362	12,647	11,904	9,397	9,077	
Import by energy source in mill. tce																																					
Hard coal	mill. tce	15.2	16.7	16.9	14.6	17.3	16.8	18.8	22.9	26.5	27.9	32.6	37.5	37.5	39.9	41.3	38.7	46.6	48.0	46.6	38.1	47.2	48.8	49.7	55.0	53.1	52.7	55.8	48.1	44.1	40.2	29.6	38.6	41.9	31.1	26.8	
Lignite	mill. tce	2.0	2.2	2.0	1.8	1.6	1.3	1.4	1.3	1.2	1.2	1.0	1.1	0.5	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum	mill. tce	194.2	206.5	221.9	222.7	223.6	209.5	217.0	215.9	224.2	210.2	212.6	216.6	205.9	206.9	209.9	214.7	213.1	197.1	203.6	190.4	187.1	178.8	182.5	186.6	184.4	188.1	189.3	192.1	182.5	186.2	170.8	171.6	180.0	165.0	172.2	
Gases	mill. tce	61.1	64.7	67.5	71.9	75.5	79.2	89.9	87.6	85.7	90.0	91.3	90.9	94.3	100.5	108.0	113.0	111.7	103.9	108.9	105.2	112.8	107.6	106.1	117.4	107.9	123.1	122.7	137.1	196.6	190.1	186.8	185.5	161.6	109.6	97.7	
Natural gas, Petroleum gas	mill. tce	61.1	64.7	67.5	71.9	75.5	79.2	89.9	87.6	85.7	90.0	91.3	90.9	94.3	100.5	108.0	113.0	111.7	103.9	108.9	105.2	112.8	107.6	106.1	117.4	107.9	123.1	122.7	137.1	196.6	190.1	186.8	185.5	161.6	109.6	97.7	
Renewable Energy Sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	1.5	2.4	2.6	2.3	2.2	2.9	3.3	2.9	3.3	3.3	3.1	2.7	2.8	3.5	3.0	4.8	3.7	3.7	3.6	3.0	
Other energy sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	mill. tce	3.9	3.8	3.6	4.2	4.6	4.9	4.6	4.7	4.7	5.0	5.5	5.7	5.7	6.0	5.9	7.0	6.0	5.6	5.1	5.1	5.3	6.3	5.7	4.8	5.0	4.5	3.5	3.4	3.9	4.9	5.9	6.4	6.1	8.5	10.0	
Nuclear energy	mill. tce	54.8	54.9	59.1	57.1	56.3	57.4	60.2	63.4	60.2	63.3	63.2	63.7	61.4	61.4	62.2	60.7	62.3	52.3	55.4	50.2	52.3	40.2	37.0	36.2	36.2	34.2	31.5	28.4	28.3	27.9	24.0	25.7	12.9	2.7	0.0	
Total	mill. tce	331.3	348.7	371.0	372.4	378.9	369.1	391.9	395.8	402.5	397.6	406.2	415.5	405.2	415.6	428.2	435.6	442.2	409.6	422.0	391.2	407.8	385.0	384.1	403.4	389.9	405.7	405.5	412.0	458.8	452.5	421.8	431.5	406.2	320.6	309.7	
Import by energy source in %																																					
Hard coal	%	4.6	4.8	4.5	3.9	4.6	4.5	4.8	5.8	6.6	7.0	8.0	9.0	9.2	9.6	9.6	8.9	10.5	11.7	11.0	9.7	11.6	12.7	12.9	13.6	13.6	13.0	13.8	11.7	9.6	8.9	7.0	8.9	10.3	9.7	8.7	
Lignite	%	0.6	0.6	0.6	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum	%	58.6	59.2	59.8	59.8	59.0	56.8	55.4	54.6	55.7	52.9	52.3	52.1	50.8	49.8	49.0	49.3	48.2	48.1	48.3	48.7	45.9	46.5	47.5	46.3	47.3	46.4	46.7	46.6	39.8	41.2	40.5	39.8	44.3	51.5	55.6	
Gases	%	18.5	18.5	18.2	19.3	19.9	21.5	22.9	22.1	21.3	22.6	22.5	21.9	23.3	24.2	25.2	25.9	25.2	25.4	25.8	26.9	27.7	28.0	27.6	29.1	27.7	30.3	30.3	33.3	42.8	42.0	44.3	43.0	39.8	34.2	31.6	
Natural gas, Petroleum gas	%	18.5	18.5	18.2	19.3	19.9	21.5	22.9	22.1	21.3	22.6	22.5	21.9	23.3	24.2	25.2	25.9	25.2	25.4	25.8	26.9	27.7	28.0	27.6	29.1	27.7	30.3	30.3	33.3	42.8	42.0	44.3	43.0	39.8	34.2	31.6	
Renewable Energy Sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.3	0.5	0.6	0.5	0.6	0.7	0.9	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.7	1.1	0.9	0.9	1.1	1.0	
Other energy sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	%	1.2	1.1	1.0	1.1	1.2	1.3	1.2	1.2	1.2	1.3	1.4	1.4	1.4	1.5	1.4	1.6	1.3	1.4	1.2	1.3	1.3	1.6	1.5	1.2	1.3	1.1	0.9	0.8	0.8	1.1	1.4	1.5	1.5	2.7	3.2	
Nuclear energy	%	16.5	15.7	15.9	15.3	14.9	15.5	15.4	16.0	15.0	15.9	15.6	15.3	15.1	14.8	14.5	13.9	14.1	12.8	13.1	12.8	12.8	10.4	9.6	9.0	9.3	8.4	7.8	6.9	6.2	5.7	6.0	3.2	0.8	0.0		
Total	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
Import by energy source, changes compared to the previous year in %																																					
Hard coal	%	n/a	9.9	1.1	-13.1	18.3	-3.1	11.9	21.7	16.0	5.0	16.9	15.1	0.0	6.6	3.4	-6.2	20.3	2.9	-3.0	-18.3	24.1	3.2	2.0	10.7	-3.6	-0.7	5.8	-13.7	-8.4	-8.7	-26.3	30.2	8.6	-25.7	-13.9	
Lignite	%	n/a	7.6	-6.3	-10.8	-9.6	-18.9	3.1	-6.2	-9.7	3.4	-15.3	11.8	-56.0	-78.6	-41.6	4.8	131.0	-28.5	-14.1	-6.0	-18.2	-16.2	-31.3	50.1	16.8	-35.1	-34.9	-28.5	5.8	19.3	2.8	-13.8	19.3	6.2	9.8	
Petroleum	%	n/a	6.3	7.5	0.4	0.4	-6.3	3.6	-0.5	3.8	-6.2	1.1	1.9	-4.9	0.5	1.4	2.3	-0.7	-7.5	3.3	-6.5	-1.7	-4.4	2.1	2.3	-1.2	2.0	0.6	1.5	-5.0	2.1	-8.3	0.5	4.9	-8.3	4.3	
Gases	%	n/a	5.8	4.4	6.6	4.9	5.0	13.5	-2.6	-2.2	5.1	1.4	-0.5	3.8	6.6	7.4	4.6	-1.2	-6.9	4.8	-3.4	7.3	-4.6	-1.4	10.6	-8.1	14.0	-0.3	11.8	43.3	-3.3	-1.7	-0.7	-12.9	-32.2	-10.9	
Natural gas, Petroleum gas	%	n/a	5.8	4.4	6.6	4.9	5.0	13.5	-2.6	-2.2	5.1	1.4	-0.5	3.8	6.6	7.4	4.6	-1.2	-6.9	4.8	-3.4	7.3	-4.6	-1.4	10.6	-8.1	14.0	-0.3	11.8	43.3	-3.3	-1.7	-0.7	-12.9	-32.2		

1.3 Export by energy source

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Export by energy source in PJ																																				
Hard coal	PJ	267	202	122	74	115	82	50	47	36	27	48	39	18	56	55	59	56	60	66	40	64	29	71	16	20	15	29	31	30	35	36	44	49	37	58
Lignite	PJ	92	44	27	22	21	15	16	14	12	11	13	14	12	13	14	16	20	20	24	24	27	29	33	33	45	42	30	32	32	28	23	26	26	22	19
Petroleum	PJ	620	606	908	952	981	633	667	683	695	776	923	821	838	819	1,049	1,136	1,177	1,214	1,077	941	780	766	786	842	885	941	952	980	941	917	930	1,063	1,148	1,030	1,229
Gases	PJ	41	68	113	121	150	101	117	126	152	206	307	221	243	448	503	712	545	551	529	465	720	619	599	773	784	1,144	811	1,129	2,800	2,394	2,683	2,498	1,837	710	371
Natural gas, Petroleum gas	PJ	39	66	111	119	149	101	116	125	151	205	306	220	243	448	503	712	545	551	529	465	720	619	599	773	784	1,144	811	1,129	2,800	2,394	2,683	2,498	1,837	710	371
Renewable Energy Sources	PJ	3	3	3	3	2	0	0	0	0	0	0	0	0	9	11	11	29	36	37	37	69	79	59	72	86	82	72	75	99	104	116	112	109	112	114
Other energy sources	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electricity	PJ	112	114	123	119	125	126	154	145	140	142	151	157	164	189	183	221	236	225	222	195	209	197	241	257	268	307	284	289	290	262	241	253	276	216	199
Nuclear energy	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	PJ	1,135	1,037	1,296	1,290	1,394	957	1,004	1,016	1,035	1,163	1,442	1,253	1,276	1,534	1,814	2,155	2,063	2,107	1,956	1,702	1,867	1,721	1,788	1,993	2,088	2,531	2,178	2,537	4,192	3,741	4,030	3,995	3,444	2,127	1,991
Export by energy source in mill. tce																																				
Hard coal	mill. tce	9.1	6.9	4.2	2.5	3.9	2.8	1.7	1.6	1.2	0.9	1.6	1.3	0.6	1.9	1.9	2.0	1.9	2.1	2.3	1.4	2.2	1.0	2.4	0.5	0.7	0.5	1.0	1.1	1.0	1.2	1.2	1.5	1.7	1.3	2.0
Lignite	mill. tce	3.1	1.5	0.9	0.8	0.7	0.5	0.5	0.5	0.4	0.4	0.4	0.5	0.4	0.5	0.6	0.7	0.7	0.8	0.8	0.9	1.0	1.1	1.1	1.5	1.4	1.0	1.1	1.1	1.0	0.8	0.9	0.9	0.7	0.7	
Petroleum	mill. tce	21.2	20.7	31.0	32.5	33.5	21.6	22.8	23.3	23.7	26.5	31.5	28.0	28.6	28.0	35.8	38.8	40.2	41.4	36.8	32.1	26.6	26.2	26.8	28.7	30.2	32.1	32.5	33.4	32.1	31.3	31.7	36.3	39.2	35.1	42.0
Gases	mill. tce	1.4	2.3	3.8	4.1	5.1	3.5	4.0	4.3	5.2	7.0	10.5	7.5	8.3	15.3	17.2	24.3	18.6	18.8	18.1	15.9	24.6	21.1	20.4	26.4	26.7	39.0	27.7	38.5	95.5	81.7	91.6	85.2	62.7	24.2	12.7
Natural gas, Petroleum gas	mill. tce	1.3	2.3	3.8	4.1	5.1	3.4	4.0	4.3	5.2	7.0	10.5	7.5	8.3	15.3	17.2	24.3	18.6	18.8	18.1	15.9	24.6	21.1	20.4	26.4	26.7	39.0	27.7	38.5	95.5	81.7	91.6	85.2	62.7	24.2	12.7
Renewable Energy Sources	mill. tce	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	0.4	1.0	1.2	1.2	1.3	2.3	2.7	2.0	2.5	2.9	2.8	2.5	2.6	3.4	3.6	4.0	3.8	3.7	3.8	3.9
Other energy sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	mill. tce	3.8	3.9	4.2	4.0	4.3	4.3	5.2	5.0	4.8	4.9	5.2	5.4	5.6	6.4	6.2	7.5	8.0	7.7	7.6	6.6	7.1	6.7	8.2	8.8	9.1	10.5	9.7	9.9	9.9	8.9	8.2	8.6	9.4	7.4	6.8
Nuclear energy	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	mill. tce	38.7	35.4	44.2	44.0	47.6	32.7	34.2	34.7	35.3	39.7	49.2	42.7	43.5	52.4	61.9	73.5	70.4	71.9	66.8	58.1	63.7	58.7	61.0	68.0	71.2	86.4	74.3	86.6	143.0	127.7	137.5	136.3	117.5	72.6	67.9
Export by energy source in %																																				
Hard coal	%	23.6	19.5	9.4	5.7	8.3	8.6	5.0	4.7	3.5	2.3	3.3	3.1	1.4	3.6	3.0	2.7	2.7	2.9	3.4	2.3	3.4	1.7	4.0	0.8	1.0	0.6	1.3	1.2	0.7	0.9	0.9	1.1	1.4	1.8	2.9
Lignite	%	8.1	4.3	2.1	1.7	1.5	1.6	1.6	1.4	1.2	1.0	0.9	1.1	1.0	0.9	0.8	0.8	1.0	0.9	1.3	1.4	1.4	1.7	1.8	1.7	2.2	1.7	1.4	1.3	0.8	0.8	0.6	0.7	0.8	1.0	1.0
Petroleum	%	54.6	58.4	70.1	73.8	70.4	66.1	66.5	67.2	67.2	66.8	64.0	65.5	65.7	53.4	57.8	52.7	57.1	57.6	55.1	55.3	41.8	44.5	44.0	42.2	42.4	37.2	43.7	38.6	22.5	24.5	23.1	26.6	33.3	48.4	61.8
Gases	%	3.6	6.5	8.7	9.4	10.8	10.6	11.7	12.4	14.6	17.7	21.3	17.6	19.1	29.2	27.7	33.0	26.4	26.2	27.0	27.3	38.6	36.0	33.5	38.8	37.5	45.2	37.2	44.5	66.8	64.0	66.6	62.5	53.3	33.4	18.6
Natural gas, Petroleum gas	%	3.5	6.4	8.6	9.3	10.7	10.5	11.6	12.3	14.6	17.6	21.2	17.6	19.0	29.2	27.7	33.0	26.4	26.2	27.0	27.3	38.6	36.0	33.5	38.8	37.5	45.2	37.2	44.5	66.8	64.0	66.6	62.5	53.3	33.4	18.6
Renewable Energy Sources	%	0.3	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.6	0.5	1.4	1.7	1.9	2.2	3.7	4.6	3.3	3.6	4.1	3.3	3.0	2.4	2.8	2.9	2.8	3.2	5.2	5.7	
Other energy sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	%	9.9	11.0	9.5	9.2	9.0	13.1	15.3	14.3	13.5	12.3	10.5	12.6	12.8	12.3	10.1	10.3	11.4	10.7	11.4	11.4	11.2	11.5	13.5	12.9	12.8	12.1	13.0	11.4	6.9	7.0	6.0	6.3	8.0	10.2	10.0
Nuclear energy	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	%	100.0																																		
Export by energy source, changes compared to the previous year in %																																				
Hard coal	%	n/a	-24.5	-39.4	-39.5	55.6	-28.5	-39.2	-5.6	-24.0	-26.0	79.4	-18.0	-53.5	206.4	-1.7	7.6	-4.9	7.6	10.1	-40.4	60.9	-53.7	141.1	-77.5	27.1	-24.5	87.9	7.0	-2.4	17.7	1.7	21.8	10.6	-22.9	54.0
Lignite	%	n/a	-51.5	-39.7	-17.5	-7.0	-26.7	4.9	-9.0	-16.7	-5.6	16.1	9.5	-15.0	10.2	2.5	17.5	21.5	0.6	23.4	-1.0	9.9	9.2	12.5	1.4	36.0	-7.2	-28.6	7.4	3.2	-12.5	-18.8	14.1	-0.1	-16.9	-11.7
Petroleum	%	n/a	-2.3	49.8	4.9	3.0	-35.5	5.4	2.4	1.8	11.6	18.9	-11.0	2.1	-2.2	28.0	8.3	3.7	3.1	-11.3	-12.7	-17.1	-1.7	2.5	7.1	5.1	6.4	1.2	2.9	-4.0	-2.6	1.4	14.3	8.0	-10.3	19.4
Gases	%	n/a	65.5	66.7	7.2	24.4	-32.4	15.5	7.4	20.4	35.8	49.2	-28.2	10.1	84.5	12.1	41.6	-23.4	1.1	-4.0	-12.1	54.7	-14.0	-3.3	29.0	1.4	45.9	-29.1	39.2	147.9	-14.5	12.1	-6.9	-26.4	-61.4	-47.7
Natural gas, Petroleum gas	%	n/a	68.2	68.2	7.4	25.0	-32.6	15.7	7.5	21.1	35.3	49.5	-28.1	10.3	84.6	12.1	41.6	-23.4	1.1	-4.0	-12.1	54.7	-14.0	-3.3	29.0	1.4	45.9	-29.1	39.2	147.9	-14.5	12.1	-6.9	-26.4	-61.4	-47.7
Renewable Energy Sources	%	n/a	-21.7	2.8	-2.7	-5.5	-100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.4	0.9	166.2	24.7	1.1	1.5	85.0	15.2	-25.7	22.5	19.6	-4.2	-12.6	4.7	31.3	5.4	11.7	-4.3	-2.5	2.7	1.8	
Other energy sources	%	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.0	17.3	-4.8	-8.4	11.4	-2.0	11.3	-10.5	5.5	-36.7	-11.3	43.3	-7.4	-3.2	-100.0	0.0	0.0					

1.4 Net import by energy source

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Net import by energy source in PJ																																					
Hard coal	PJ	177	287	372	355	393	410	501	623	742	790	906	1,059	1,080	1,115	1,155	1,076	1,310	1,346	1,298	1,076	1,321	1,399	1,386	1,597	1,535	1,529	1,605	1,380	1,262	1,144	832	1,087	1,179	875	728	
Lignite	PJ	-32	19	33	31	28	24	25	24	22	24	17	19	3	-10	-12	-14	-15	-17	-22	-22	-25	-27	-31	-31	-43	-40	-29	-31	-32	-28	-22	-26	-25	-21	-18	
Petroleum	PJ	5,072	5,445	5,595	5,576	5,573	5,508	5,693	5,646	5,875	5,384	5,308	5,527	5,197	5,245	5,102	5,156	5,070	4,562	4,891	4,638	4,705	4,475	4,564	4,629	4,520	4,571	4,595	4,649	4,407	4,541	4,074	3,968	4,127	3,807	3,816	
Gases	PJ	1,751	1,828	1,866	1,988	2,062	2,220	2,517	2,441	2,359	2,433	2,368	2,443	2,522	2,498	2,663	2,599	2,727	2,495	2,663	2,618	2,587	2,535	2,511	2,667	2,379	2,463	2,785	2,890	2,961	3,177	2,790	2,938	2,899	2,503	2,493	
Natural gas, Petroleum gas	PJ	1,752	1,829	1,867	1,989	2,063	2,221	2,518	2,442	2,359	2,434	2,369	2,443	2,522	2,498	2,663	2,599	2,727	2,495	2,663	2,618	2,587	2,535	2,511	2,667	2,379	2,463	2,785	2,890	2,961	3,177	2,790	2,938	2,899	2,503	2,493	
Renewable Energy Sources	PJ	-3	-3	-3	-3	-2	0	0	0	0	0	0	0	0	10	13	33	41	40	31	27	17	17	28	24	10	8	8	6	2	-16	23	-3	-1	-5	-27	
Other energy sources	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Electricity	PJ	3	-2	-19	3	8	17	-19	-8	-2	4	11	10	2	-12	-9	-16	-61	-60	-72	-44	-54	-14	-74	-116	-122	-174	-182	-189	-175	-118	-68	-67	-98	33	95	
Nuclear energy	PJ	1,606	1,609	1,733	1,675	1,650	1,682	1,764	1,859	1,764	1,855	1,851	1,868	1,798	1,801	1,822	1,779	1,826	1,533	1,623	1,472	1,533	1,178	1,085	1,061	1,060	1,001	923	833	829	819	702	754	379	79	0	
Total	PJ	8,573	9,183	9,577	9,625	9,711	9,862	10,481	10,584	10,760	10,490	10,462	10,926	10,601	10,647	10,734	10,613	10,897	9,899	10,411	9,764	10,084	9,563	9,468	9,831	9,339	9,357	9,705	9,537	9,253	9,519	8,332	8,651	8,459	7,270	7,086	
Net import by energy source in mill. tce																																					
Hard coal	mill. tce	6.1	9.8	12.7	12.1	13.4	14.0	17.1	21.3	25.3	26.9	30.9	36.1	36.8	38.0	39.4	36.7	44.7	45.9	44.3	36.7	45.1	47.7	47.3	54.5	52.4	52.2	54.8	47.1	43.0	39.0	28.4	37.1	40.2	29.8	24.8	
Lignite	mill. tce	-1.1	0.7	1.1	1.1	0.9	0.8	0.8	0.8	0.8	0.8	0.6	0.7	0.1	-0.4	-0.4	-0.5	-0.5	-0.6	-0.7	-0.7	-0.8	-0.9	-1.1	-1.1	-1.5	-1.4	-1.0	-1.1	-1.1	-0.9	-0.8	-0.9	-0.9	-0.7	-0.6	
Petroleum	mill. tce	173.1	185.8	190.9	190.2	190.1	187.9	194.3	192.6	200.5	183.7	181.1	188.6	177.3	179.0	174.1	175.9	173.0	155.7	166.9	158.3	160.5	152.7	155.7	157.9	154.2	156.0	156.8	158.6	150.4	154.9	139.0	135.4	140.8	129.9	130.2	
Gases	mill. tce	59.7	62.4	63.7	67.8	70.4	75.8	85.9	83.3	80.5	83.0	80.8	83.3	86.0	85.2	90.9	88.7	93.1	85.1	90.9	89.3	88.3	86.5	85.7	91.0	81.2	84.0	95.0	98.6	101.0	108.4	95.2	100.3	98.9	85.4	85.1	
Natural gas, Petroleum gas	mill. tce	59.8	62.4	63.7	67.9	70.4	75.8	85.9	83.3	80.5	83.1	80.8	83.4	86.0	85.2	90.9	88.7	93.1	85.1	90.9	89.3	88.3	86.5	85.7	91.0	81.2	84.0	95.0	98.6	101.0	108.4	95.2	100.3	98.9	85.4	85.1	
Renewable Energy Sources	mill. tce	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.4	1.1	1.4	1.4	1.1	0.9	0.6	0.6	0.9	0.8	0.3	0.3	0.3	0.2	0.1	-0.5	0.8	-0.1	0.0	-0.2	-0.9	
Other energy sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	mill. tce	0.1	-0.1	-0.7	0.1	0.3	0.6	-0.6	-0.3	-0.1	0.1	0.4	0.3	0.1	-0.4	-0.3	-0.6	-2.1	-2.0	-2.5	-1.5	-1.8	-0.5	-2.5	-4.0	-4.2	-5.9	-6.2	-6.4	-6.0	-4.0	-2.3	-2.3	-3.3	1.1	3.2	
Nuclear energy	mill. tce	54.8	54.9	59.1	57.1	56.3	57.4	60.2	63.4	60.2	63.3	63.2	63.7	61.4	61.4	62.2	60.7	62.3	52.3	55.4	50.2	52.3	40.2	37.0	36.2	36.2	34.2	31.5	28.4	28.3	27.9	24.0	25.7	12.9	2.7	0.0	
Total	mill. tce	292.5	313.3	326.8	328.4	331.3	336.5	357.6	361.1	367.1	357.9	357.0	372.8	361.7	363.3	366.3	362.1	371.8	337.7	355.2	333.2	344.1	326.3	323.1	335.4	318.6	319.3	331.2	325.4	315.7	324.8	284.3	295.2	288.6	248.1	241.8	
Net import by energy source in %																																					
Hard coal	%	2.1	3.1	3.9	3.7	4.0	4.2	4.8	5.9	6.9	7.5	8.7	9.7	10.2	10.5	10.8	10.1	12.0	13.6	12.5	11.0	13.1	14.6	14.6	16.2	16.4	16.3	16.5	14.5	13.6	12.0	10.0	12.6	13.9	12.0	10.3	
Lignite	%	-0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	-0.1	-0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.3	-0.3	-0.3	-0.5	-0.4	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	
Petroleum	%	59.2	59.3	58.4	57.9	57.4	55.9	54.3	53.3	54.6	51.3	50.7	50.6	49.0	49.3	47.5	48.6	46.5	46.1	47.0	47.5	46.7	46.8	48.2	47.1	48.4	48.8	47.3	48.8	47.6	47.7	48.9	45.9	48.8	52.4	53.9	
Gases	%	20.4	19.9	19.5	20.7	21.2	22.5	24.0	23.1	21.9	23.2	22.6	22.4	23.8	23.5	24.8	24.5	25.0	25.2	25.6	26.8	25.7	26.5	26.5	27.1	25.5	26.3	28.7	30.3	32.0	33.4	33.5	34.0	34.3	34.4	35.2	
Natural gas, Petroleum gas	%	20.4	19.9	19.5	20.7	21.2	22.5	24.0	23.1	21.9	23.2	22.6	22.4	23.8	23.5	24.8	24.5	25.0	25.2	25.6	26.8	25.7	26.5	26.5	27.1	25.5	26.3	28.7	30.3	32.0	33.4	33.5	34.0	34.3	34.4	35.2	
Renewable Energy Sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.4	0.4	0.3	0.3	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.0	-0.2	0.3	0.0	0.0	-0.1	-0.4	
Other energy sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Electricity	%	0.0	0.0	-0.2	0.0	0.1	0.2	-0.2	-0.1	0.0	0.0	0.1	0.1	0.0	-0.1	-0.1	-0.2	-0.6	-0.6	-0.7	-0.5	-0.5	-0.1	-0.8	-1.2	-1.3	-1.9	-1.9	-2.0	-1.9	-1.2	-0.8	-0.8	-1.2	0.5	1.3	
Nuclear energy	%	18.7	17.5	18.1	17.4	17.0	17.1	16.8	17.6	16.4	17.7	17.7	17.1	17.0	16.9	16.8	16.8	15.5	15.1	15.2	12.3	11.5	10.8	11.3	10.7	9.5	8.7	9.0	8.6	8.4	8.7	4.5	1.1	0.0	0.0	0.0	
Total	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0						
Net import by energy source, changes compared to the previous year in %																																					
Hard coal	%	n/a	61.8	29.5	-4.4	10.5	4.3	22.2	24.5	19.0	6.5	14.8	16.8	2.0	3.3	3.6	-6.8	21.7	2.7	-3.5	-17.1	22.8	5.9	-0.9	15.2	-3.9	-0.4	5.0	-14.0	-8.6	-9.4	-27.2	30.6	8.5	-25.8	-16.8	
Lignite	%	n/a	-160.4	69.8	-5.3	-11.4	-13.1	2.0	-4.3	-5.4	8.2	-30.0	13.6	-86.9	-510.2	16.0	19.4	6.7	9.2	30.6	-0.3	13.2	11.3	15.3	-0.5	37.1	-5.9	-28.3	8.5	1.1	-13.2	-19.4	15.1	-0.6	-17.7	-12.7	
Petroleum	%	n/a	7.4	2.8	-0.3	-0.1	-1.2	3.4	-0.8	4.1	-8.4	-1.4	4.1	-6.0	0.9	-2.7	1.1	-1.7	-10.0	7.2	-5.2	1.4	-4.9	2.0	1.4	-2.3	1.1	0.5	1.2	-5.2	3.0	-10.3	-2.6	4.0	-7.7	0.2	
Gases	%	n/a	4.4	2.1	6.5	3.7	7.7	13.4	-3.0	-3.4	3.1	-2.7	3.1	3.2	-0.9	6.6	-2.4	4.9	-8.5	6.7	-1.7	-1.2	-2.0	-0.9	6.2	-10.8	3.5	13.1	3.8	2.5	7.3	-12.2	5.3	-1.3	-13.7	-0.4	
Natural gas, Petroleum gas	%	n/a	4.4	2.1	6.5	3.7	7.7	13.4	-3.0	-3.4	3.2	-2.7	3.1	3.2	-0.9	6.6	-2.4	4.9	-8.5	6.7	-1.7	-1.2	-2.0	-0.9	6.2	-10.8	3.5	13.1	3.8	2.5	7.3	-12.2	5.3	-1.3	-13.7	-0.4	
Renewable Energy Sources	%	n/a	-21.7	2.8	-2.7																																

1.5 Bunkers on sea-going ships

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Bunkers on sea-going ships in PJ																																					
Diesel oil	PJ	23.3	19.3	19.0	21.1	19.7	20.4	27.9	27.4	22.5	20.8	21.5	19.7	20.6	21.5	18.8	18.3	22.3	24.4	20.2	20.7	22.3	20.9	18.4	18.2	20.9	43.3	42.2	9.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Fuel oil light	PJ	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	27.0	31.3	30.1	22.7	30.1	31.5	27.8	26.6	
Fuel oil heavy	PJ	80.2	68.0	54.0	70.1	64.4	64.4	56.5	62.7	62.8	66.0	69.6	72.3	77.9	86.9	92.8	86.3	86.1	104.3	104.4	93.2	93.9	92.2	87.0	77.6	75.0	57.4	75.4	58.3	39.2	26.8	32.4	28.1	29.7	26.8	27.2	
Other petroleum products	PJ	1.8	2.0	2.2	2.2	2.3	2.1	1.6	1.5	1.6	1.7	1.6	1.3	1.6	0.5	0.4	0.3	0.2	0.0	0.4	0.7	0.6	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	
Total	PJ	105.4	89.4	75.2	93.3	86.4	86.9	86.0	91.6	86.9	88.5	92.7	93.3	100.1	108.9	112.0	104.9	108.6	128.7	125.0	114.7	116.9	113.3	105.4	95.8	96.0	100.7	117.7	95.1	70.5	56.9	55.1	58.2	61.1	54.7	53.8	
Bunkers on sea-going ships in mill. tce																																					
Diesel oil	mill. tce	0.8	0.7	0.6	0.7	0.7	0.7	1.0	0.9	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.8	0.8	0.7	0.7	0.8	0.7	0.6	0.6	0.7	1.5	1.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Fuel oil light	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	1.1	1.0	0.8	1.0	1.1	0.9	0.9	
Fuel oil heavy	mill. tce	2.7	2.3	1.8	2.4	2.2	2.2	1.9	2.1	2.1	2.3	2.4	2.5	2.7	3.0	3.2	2.9	2.9	3.6	3.6	3.2	3.2	3.1	3.0	2.6	2.6	2.0	2.6	2.0	1.3	0.9	1.1	1.0	1.0	0.9	0.9	
Other petroleum products	mill. tce	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total	mill. tce	3.6	3.0	2.6	3.2	2.9	3.0	2.9	3.1	3.0	3.0	3.2	3.2	3.4	3.7	3.8	3.6	3.7	4.4	4.3	3.9	4.0	3.9	3.6	3.3	3.3	3.4	4.0	3.2	2.4	1.9	1.9	2.0	2.1	1.9	1.8	
Bunkers on sea-going ships in %																																					
Diesel oil	%	22.1	21.6	25.2	22.6	22.8	23.5	32.5	30.0	25.9	23.5	23.2	21.1	20.6	19.7	16.7	17.5	20.5	18.9	16.2	18.0	19.1	18.4	17.5	19.0	21.7	43.0	35.9	10.3	0.0	0.0	0.0	0.0	0.0	0.0		
Fuel oil light	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	28.4	44.3	52.9	41.2	51.7	51.5	50.9	49.3	
Fuel oil heavy	%	76.2	76.1	71.8	75.1	74.5	74.1	65.7	68.5	72.3	74.6	75.0	77.5	77.9	79.8	82.9	82.2	79.2	81.0	83.5	81.3	80.3	81.4	82.5	80.9	78.2	57.0	64.1	61.3	55.7	47.1	58.8	48.3	48.5	49.0	50.6	
Other petroleum products	%	1.7	2.3	3.0	2.3	2.7	2.4	1.8	1.6	1.8	1.9	1.8	1.4	1.6	0.5	0.4	0.3	0.2	0.0	0.3	0.7	0.6	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1		
Total	%	100.0																																			
Bunkers on sea-going ships, changes compared to the previous year in %																																					
Diesel oil	%	n/a	-17.3	-1.8	11.2	-6.7	3.8	36.8	-1.8	-17.9	-7.8	3.8	-8.6	4.5	4.3	-12.7	-2.2	21.6	9.2	-17.1	2.3	8.1	-6.5	-11.7	-1.3	14.6	107.4	-2.4	-76.7	-100.0	0.0	0.0	0.0	0.0	0.0		
Fuel oil light	%	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.0	-3.8	-24.6	32.8	4.6	-11.7	-4.4	
Fuel oil heavy	%	n/a	-15.2	-20.6	29.6	-8.1	0.0	-12.3	11.1	0.2	5.1	5.4	3.9	7.7	11.6	6.8	-7.1	-0.2	21.1	0.2	-10.7	0.7	-1.8	-5.6	-10.8	-3.2	-23.5	31.5	-22.8	-32.7	-31.7	21.0	-13.3	5.5	-9.6	1.6	
Other petroleum products	%	n/a	13.1	9.6	-1.3	7.1	-11.6	-23.6	-8.3	9.6	7.2	-4.8	-21.7	23.1	-66.9	-24.1	-24.7	-15.9	-80.3	671.4	97.1	-12.9	-65.2	-75.7	1.8	1.8	-42.1	-12.1	-20.7	-100.0	0.0	0.0	0.0	0.0	0.0	-13.4	
Total	%	n/a	-15.2	-15.8	24.1	-7.5	0.6	-1.0	6.5	-5.1	1.8	4.8	0.6	7.3	8.9	2.8	-6.3	3.5	18.5	-2.8	-8.3	1.9	-3.1	-6.9	-9.1	0.1	4.9	16.9	-19.2	-25.8	-19.3	-3.1	5.6	5.0	-10.6	-1.5	

1990 - 2023: final data, 2024: provisional data

2.1 Primary energy consumption by energy source

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Primary energy consumption by energy source in PJ																																				
Hard coal	PJ	2,306	2,330	2,196	2,139	2,140	2,060	2,090	2,065	2,059	1,967	2,021	1,949	1,927	2,010	1,909	1,808	1,964	2,017	1,800	1,496	1,714	1,715	1,725	1,840	1,759	1,729	1,693	1,502	1,428	1,084	896	1,112	1,142	860	773
Lignite	PJ	3,201	2,507	2,176	1,983	1,861	1,734	1,688	1,595	1,514	1,473	1,550	1,633	1,663	1,639	1,648	1,596	1,576	1,613	1,554	1,507	1,512	1,564	1,645	1,629	1,574	1,565	1,511	1,507	1,481	1,163	958	1,127	1,168	895	809
Petroleum	PJ	5,228	5,547	5,628	5,746	5,692	5,689	5,808	5,753	5,775	5,599	5,499	5,577	5,381	5,232	5,144	5,147	5,113	4,611	4,895	4,657	4,693	4,543	4,557	4,644	4,512	4,589	4,588	4,688	4,482	4,527	4,080	4,045	4,111	3,883	3,836
Gases	PJ	2,304	2,422	2,398	2,536	2,580	2,812	3,145	3,005	3,031	3,022	2,996	3,158	3,157	3,199	3,215	3,269	3,334	3,210	3,236	3,052	3,183	2,923	2,934	3,074	2,672	2,781	3,068	3,167	3,098	3,220	3,145	3,310	2,727	2,626	2,733
Natural gas, Petroleum gas	PJ	2,293	2,409	2,382	2,520	2,567	2,799	3,132	2,992	3,019	3,010	2,985	3,148	3,143	3,181	3,198	3,250	3,312	3,191	3,222	3,039	3,171	2,911	2,920	3,059	2,660	2,770	3,056	3,159	3,091	3,214	3,136	3,303	2,721	2,621	2,728
Renewable Energy Sources	PJ	196	197	207	228	253	275	270	344	379	403	417	432	455	587	681	790	965	1,120	1,161	1,159	1,321	1,377	1,541	1,591	1,587	1,692	1,696	1,808	1,844	1,921	1,988	1,981	2,069	2,079	2,094
Other energy sources	PJ	0	0	0	0	0	0	0	0	0	0	56	51	43	137	168	137	139	158	188	219	239	244	225	201	213	210	223	222	215	216	205	214	212	203	202
Net import of electricity	PJ	3	-2	-19	3	8	17	-19	-8	-2	4	11	10	2	-12	-9	-16	-61	-60	-72	-44	-54	-14	-74	-116	-122	-174	-182	-189	-175	-118	-68	-67	-98	33	95
Nuclear energy	PJ	1,668	1,609	1,733	1,675	1,650	1,682	1,764	1,859	1,764	1,855	1,851	1,868	1,798	1,801	1,822	1,779	1,826	1,533	1,623	1,472	1,533	1,178	1,085	1,061	1,060	1,001	923	833	829	819	702	754	379	79	0
Total	PJ	14,905	14,610	14,319	14,309	14,185	14,269	14,746	14,614	14,521	14,323	14,401	14,679	14,427	14,594	14,579	14,508	14,855	14,202	14,386	13,518	14,142	13,530	13,638	13,923	13,254	13,393	13,519	13,538	13,202	12,833	11,905	12,477	11,711	10,658	10,542
Primary energy consumption by energy source in mill. tce																																				
Hard coal	mill. tce	78.7	79.5	74.9	73.0	70.3	71.3	70.5	70.3	67.1	69.0	66.5	65.7	68.6	65.1	61.7	67.0	68.8	61.4	51.1	58.5	58.5	58.9	62.8	60.0	59.0	57.8	51.3	48.7	37.0	30.6	37.9	39.0	29.3	26.4	
Lignite	mill. tce	109.2	85.5	74.3	67.6	63.5	59.2	57.6	54.4	51.7	50.3	52.9	55.7	56.7	55.9	56.2	54.4	53.8	55.0	53.0	51.4	51.6	53.4	56.1	55.6	53.7	53.4	51.5	51.4	50.5	39.7	32.7	38.5	39.9	30.5	27.6
Petroleum	mill. tce	178.4	189.3	192.0	196.0	194.2	194.1	198.2	196.3	197.1	191.0	187.6	190.3	183.6	178.5	175.5	175.6	174.4	157.3	167.0	158.9	160.1	155.0	155.5	158.4	154.0	156.6	156.5	160.0	152.9	154.5	139.2	138.0	140.3	132.5	130.9
Gases	mill. tce	78.6	82.6	81.8	86.5	88.0	95.9	107.3	102.5	103.4	103.1	102.2	107.8	107.7	109.2	109.7	111.5	113.8	109.5	110.4	104.1	108.6	99.8	100.1	104.9	91.2	94.9	104.7	108.1	105.7	109.9	107.3	112.9	93.1	89.6	93.3
Natural gas, Petroleum gas	mill. tce	78.2	82.2	81.3	86.0	87.6	95.5	106.9	102.1	103.0	102.7	101.9	107.4	107.2	108.6	109.1	110.9	113.0	108.9	109.9	103.7	108.2	99.3	99.6	104.4	90.8	94.5	104.3	107.8	105.4	109.7	107.0	112.7	92.8	89.4	93.1
Renewable Energy Sources	mill. tce	6.7	6.7	7.1	7.8	8.6	9.4	9.2	11.8	12.9	13.8	14.2	14.7	15.5	20.0	23.3	27.0	32.9	38.2	39.6	39.6	45.1	47.0	52.6	54.3	54.1	57.7	57.9	61.7	62.9	65.6	67.8	67.6	70.6	70.9	71.5
Other energy sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.8	1.5	4.7	5.7	4.7	4.8	5.4	6.4	7.5	8.1	8.3	7.7	6.9	7.3	7.2	7.6	7.6	7.3	7.4	7.0	7.3	7.2	6.9	6.9
Net import of electricity	mill. tce	0.1	-0.1	-0.7	0.1	0.3	0.6	-0.6	-0.3	-0.1	0.1	0.4	0.3	0.1	-0.4	-0.3	-0.6	-2.1	-2.0	-2.5	-1.5	-1.8	-0.5	-2.5	-4.0	-4.2	-5.9	-6.2	-6.4	-6.0	-4.0	-2.3	-2.3	-3.3	1.1	3.2
Nuclear energy	mill. tce	56.9	54.9	59.1	57.1	56.3	57.4	60.2	63.4	60.2	63.3	63.2	63.7	61.4	61.4	62.2	60.7	62.3	52.3	55.4	50.2	52.3	40.2	37.0	36.2	36.2	34.2	31.5	28.4	28.3	27.9	24.0	25.7	12.9	2.7	0.0
Total	mill. tce	508.6	498.5	488.6	488.2	484.0	486.9	503.1	498.6	495.4	488.7	491.4	500.8	492.3	498.0	497.4	495.0	506.9	484.6	490.8	461.2	482.5	461.7	465.3	475.1	452.2	457.0	461.3	461.9	450.5	437.9	406.2	425.7	399.6	363.7	359.7
Primary energy consumption by energy source in %																																				
Hard coal	%	15.5	15.9	15.3	14.9	15.1	14.4	14.2	14.1	14.2	13.7	14.0	13.3	13.4	13.8	13.1	12.5	13.2	14.2	12.5	11.1	12.1	12.7	13.2	13.3	12.9	12.5	11.1	10.8	8.4	7.5	8.9	9.8	8.1	7.3	
Lignite	%	21.5	17.2	15.2	13.9	13.1	12.2	11.4	10.9	10.4	10.3	10.8	11.1	11.5	11.2	11.3	11.0	10.6	11.4	10.8	11.1	10.7	11.6	12.1	11.7	11.9	11.7	11.2	11.1	11.2	9.1	8.0	9.0	10.0	8.4	7.7
Petroleum	%	35.1	38.0	39.3	40.2	40.1	39.9	39.4	39.4	39.8	39.1	38.2	38.0	37.3	35.9	35.3	35.5	34.4	32.5	34.0	34.4	33.2	33.6	33.4	33.4	34.0	34.3	33.9	34.6	34.0	35.3	34.3	32.4	35.1	36.4	36.4
Gases	%	15.5	16.6	16.7	17.7	18.2	19.7	21.3	20.6	20.9	21.1	20.8	21.5	21.9	21.9	22.1	22.5	22.4	22.6	22.5	22.6	22.5	21.6	21.5	22.1	20.2	20.8	22.7	23.4	23.5	25.1	26.4	26.5	23.3	24.6	25.9
Natural gas, Petroleum gas	%	15.4	16.5	16.6	17.6	18.1	19.6	21.2	20.5	20.8	21.0	20.7	21.4	21.8	21.8	21.9	22.4	22.3	22.5	22.4	22.5	22.4	21.5	21.4	22.0	20.1	20.7	22.6	23.3	23.4	25.0	26.3	26.5	23.2	24.6	25.9
Renewable Energy Sources	%	1.3	1.4	1.4	1.6	1.8	1.9	1.8	2.4	2.6	2.8	2.9	2.9	3.2	4.0	4.7	5.4	6.5	7.9	8.1	8.6	9.3	10.2	11.3	11.4	12.0	12.6	12.5	13.4	14.0	15.0	16.7	15.9	17.7	19.5	19.9
Other energy sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.3	0.9	1.2	0.9	0.9	1.1	1.3	1.6	1.7	1.8	1.6	1.4	1.6	1.6	1.6	1.6	1.7	1.7	1.7	1.8	1.9	1.9	
Net import of electricity	%	0.0	0.0	-0.1	0.0	0.1	0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.0	-0.1	-0.1	-0.1	-0.4	-0.4	-0.5	-0.3	-0.4	-0.1	-0.5	-0.8	-0.9	-1.3	-1.3	-1.4	-1.3	-0.9	-0.6	-0.5	-0.8	0.3	0.9
Nuclear energy	%	11.2	11.0	12.1	11.7	11.6	11.8	12.0	12.7	12.2	13.0	12.9	12.7	12.5	12.3	12.5	12.3	12.3	10.8	11.3	10.9	10.8	8.7	8.0	7.6	8.0	7.5	6.8	6.2	6.3	6.4	5.9	6.0	3.2	0.7	0.0
Total	%	100.0																																		
Primary energy consumption by energy source, changes compared to the previous year in %																																				
Hard coal	%	n/a	1.0	-5.8	-2.6	0.1	-3.8	1.5	-1.2	-0.3	-4.5	2.8	-3.6	-1.1	4.3	-5.0	-5.3	8.7	2.7	-10.8	-16.9	14.6	0.0	6.6	-4.4	-1.7	-2.1	-11.3	-4.9	-24.1	-17.4	24.1	2.7	-24.7	-10.1	
Lignite	%	n/a	-21.7	-13.2	-8.9	-6.1	-6.8	-2.7	-5.5	-5.1	-2.7	5.3	5.3	1.8	-1.4	0.5	-3.2	-1.3	2.4	-3.6	-3.0	0.3	3.5	5.1	-1.0	-3.4	-0.5	-3.5	-0.2	-1.8	-21.5	-17.6	17.7	3.6	-23.4	-9.5
Petroleum	%	n/a	6.1	1.5	2.1	-0.9	-0.1	2.1	-1.0	0.4	-3.1	-1.8	1.4	-3.5	-2.8	-1.7	0.1	-0.7	-9.8	6.2	-4.9	0.8	-3.2	0.3	1.9	-2.8	1.7	0.0	2.2	-4.4	1.0	-9.9	-0.8	1.6	-5.5	-1.2
Gases	%	n/a	5.1	-1.0	5.8	1.7	9.0	11.8	-4.4	0.9	-0.3	-0.9	5.4	0.0	1.3	0.5	1.7	2.0	-3.7	0.8	-5.7	4.3	-8.1	0.4	4.8	-13.1	4.1	10.3	3.2	-2.2	3.9	-2.4	5.3	-17.6	-3.7	4.1
Natural gas, Petroleum																																				

2.2 Structure of energy consumption by sector

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Structure of energy consumption by sector in PJ																																				
Indigenous energy production	PJ	6,224	5,359	5,014	4,610	4,370	4,328	4,157	4,089	3,865	3,854	3,793	3,714	3,750	3,980	4,066	4,018	4,077	4,285	4,097	3,960	4,036	4,134	4,255	4,158	4,053	4,079	3,948	4,021	3,935	3,626	3,402	3,601	3,707	3,414	3,357
Primary energy consumption	PJ	14,905	14,610	14,319	14,309	14,185	14,269	14,746	14,614	14,521	14,323	14,401	14,679	14,427	14,594	14,579	14,508	14,855	14,202	14,386	13,518	14,142	13,530	13,638	13,923	13,254	13,393	13,519	13,538	13,202	12,833	11,905	12,477	11,711	10,658	10,542
Transformation input	PJ	12,893	12,001	11,929	11,735	11,729	11,450	11,591	11,326	11,513	11,319	11,617	11,530	11,478	11,817	12,048	12,197	12,256	12,060	11,849	10,987	11,177	10,760	10,882	10,806	10,625	10,757	10,722	10,615	10,207	9,815	9,132	9,468	9,388	8,181	8,404
Transformation output	PJ	9,320	8,517	8,488	8,433	8,428	8,232	8,261	8,046	8,286	8,082	8,307	8,160	8,152	8,515	8,784	8,944	8,943	8,793	8,643	8,013	8,059	7,880	7,981	7,889	7,762	7,991	8,036	8,108	7,824	7,730	7,290	7,463	7,599	6,889	7,318
Cons., losses in energy sector	PJ	902	870	840	886	810	765	776	787	790	751	788	822	829	872	963	1,020	994	1,013	904	835	606	643	692	747	620	709	731	794	804	741	654	656	509	537	581
Non-energy consumption	PJ	958	890	911	887	964	963	953	1,012	1,046	1,035	1,068	1,031	1,046	1,053	1,061	1,091	1,059	1,035	1,018	959	1,034	1,017	983	979	988	928	974	1,011	964	942	948	996	850	707	780
Final energy consumption	PJ	9,472	9,366	9,127	9,234	9,110	9,322	9,686	9,535	9,458	9,300	9,235	9,455	9,226	9,367	9,292	9,144	9,489	8,887	9,258	8,750	9,383	8,990	9,061	9,280	8,782	8,990	9,128	9,226	9,051	9,065	8,462	8,820	8,563	8,123	8,095
Mining, quarrying, manufact.	PJ	2,977	2,694	2,560	2,432	2,463	2,474	2,424	2,440	2,397	2,384	2,421	2,365	2,322	2,520	2,542	2,469	2,539	2,622	2,573	2,280	2,596	2,666	2,614	2,590	2,562	2,573	2,637	2,657	2,589	2,504	2,398	2,572	2,362	2,181	2,187
Transport	PJ	2,379	2,428	2,522	2,596	2,553	2,614	2,625	2,643	2,691	2,781	2,751	2,698	2,672	2,584	2,619	2,596	2,688	2,584	2,545	2,519	2,535	2,539	2,546	2,595	2,604	2,638	2,704	2,784	2,738	2,746	2,316	2,379	2,527	2,506	2,478
Private households	PJ	2,357	2,483	2,401	2,581	2,537	2,655	2,890	2,854	2,782	2,612	2,584	2,822	2,689	2,751	2,654	2,605	2,657	2,298	2,627	2,507	2,690	2,352	2,506	2,624	2,248	2,345	2,407	2,400	2,400	2,506	2,472	2,572	2,446	2,276	2,251
Services	PJ	1,759	1,761	1,644	1,625	1,556	1,579	1,747	1,598	1,588	1,523	1,478	1,571	1,544	1,512	1,478	1,474	1,605	1,384	1,513	1,443	1,563	1,434	1,395	1,472	1,369	1,434	1,381	1,385	1,324	1,308	1,276	1,297	1,228	1,159	1,179
Structure of energy consumption by sector in mill. tce																																				
Indigenous energy production	mill. tce	212.4	182.8	171.1	157.3	149.1	147.7	141.8	139.5	131.9	131.5	129.4	126.7	128.0	135.8	138.8	137.1	139.1	146.2	139.8	135.1	137.7	141.0	145.2	141.9	138.3	139.2	134.7	137.2	134.3	123.7	116.1	122.9	126.5	116.5	114.5
Primary energy consumption	mill. tce	508.6	498.5	488.6	488.2	484.0	486.9	503.1	498.6	495.4	488.7	491.4	500.8	492.3	498.0	497.4	495.0	506.9	484.6	490.8	461.2	482.5	461.7	465.3	475.1	452.2	457.0	461.3	461.9	450.5	437.9	406.2	425.7	399.6	363.7	359.7
Transformation input	mill. tce	439.9	409.5	407.0	400.4	400.2	390.7	395.5	386.4	392.8	386.2	396.4	393.4	391.7	403.2	411.1	416.2	418.2	411.5	404.3	374.9	381.4	367.1	371.3	368.7	362.5	367.0	365.9	362.2	348.3	334.9	311.6	323.1	320.3	279.1	286.7
Transformation output	mill. tce	318.0	290.6	289.6	287.7	287.6	280.9	281.9	274.5	282.7	275.8	283.4	278.4	278.2	290.5	299.7	305.2	305.1	300.0	294.9	273.4	275.0	268.9	272.3	269.2	264.8	272.6	274.2	276.6	267.0	263.7	248.8	254.6	259.3	235.1	249.7
Cons., losses in energy sector	mill. tce	30.8	29.7	28.7	30.2	27.7	26.1	26.5	26.8	27.0	25.6	26.9	28.1	28.3	29.8	32.8	34.8	33.9	34.6	30.8	28.5	20.7	22.0	23.6	25.5	21.2	24.2	25.0	27.1	27.4	25.3	22.3	22.4	17.4	18.3	19.8
Non-energy consumption	mill. tce	32.7	30.4	31.1	30.3	32.9	32.9	32.5	34.5	35.7	35.3	36.4	35.2	35.7	35.9	36.2	37.2	36.1	35.3	34.7	32.7	35.3	34.7	33.5	33.4	33.7	31.7	33.2	34.5	32.9	32.2	32.3	34.0	29.0	24.1	26.6
Final energy consumption	mill. tce	323.2	319.6	311.4	315.1	310.8	318.1	330.5	325.3	322.7	317.3	315.1	322.6	314.8	319.6	317.0	312.0	323.8	303.2	315.9	298.6	320.2	306.7	309.2	316.6	299.7	306.7	311.4	314.8	308.8	309.3	288.7	300.9	292.2	277.1	276.2
Mining, quarrying, manufact.	mill. tce	101.6	91.9	87.3	83.0	84.1	84.4	82.7	83.3	81.8	81.3	82.6	80.7	79.2	86.0	86.7	84.2	86.6	89.5	87.8	77.8	88.6	91.0	89.2	88.4	87.4	87.8	90.0	90.7	88.3	85.5	81.8	87.8	80.6	74.4	74.6
Transport	mill. tce	81.2	82.8	86.1	88.6	87.1	89.2	89.6	90.2	91.8	94.9	93.9	92.0	91.2	88.2	89.4	88.6	91.7	88.2	86.8	86.0	86.5	86.6	86.9	88.5	88.8	90.0	92.2	95.0	93.4	93.7	79.0	81.2	86.2	85.5	84.6
Private households	mill. tce	80.4	84.7	81.9	88.1	86.6	90.6	98.6	97.4	94.9	89.1	88.2	96.3	91.7	93.9	90.5	88.9	90.7	78.4	89.6	85.5	91.8	80.2	85.5	89.5	76.7	80.0	82.1	81.9	81.9	85.5	84.3	87.8	83.4	77.7	76.8
Services	mill. tce	60.0	60.1	56.1	55.4	53.1	53.9	59.6	54.5	54.2	52.0	50.4	53.6	52.7	51.6	50.4	50.3	54.8	47.2	51.6	49.2	53.3	48.9	47.6	50.2	46.7	48.9	47.1	47.3	45.2	44.6	43.6	44.2	41.9	39.6	40.2
Structure of energy consumption by sector, changes compared to the previous year in %																																				
Indigenous energy production	%	n/a	-13.9	-6.4	-8.1	-5.2	-1.0	-4.0	-1.6	-5.5	-0.3	-1.6	-2.1	1.0	6.1	2.2	-1.2	1.5	5.1	-4.4	-3.3	1.9	2.4	2.9	-2.3	-2.5	0.7	-3.2	1.8	-2.1	-7.9	-6.2	5.9	2.9	-7.9	-1.7
Primary energy consumption	%	n/a	-2.0	-2.0	-0.1	-0.9	0.6	3.3	-0.9	-0.6	-1.4	0.5	1.9	-1.7	1.2	-0.1	-0.5	2.4	-4.4	1.3	-6.0	4.6	-4.3	0.8	2.1	-4.8	1.0	0.9	0.1	-2.5	-2.8	-7.2	4.8	-6.1	-9.0	-1.1
Transformation input	%	n/a	-6.9	-0.6	-1.6	-0.1	-2.4	1.2	-2.3	1.7	-1.7	2.6	-0.7	-0.4	2.9	2.0	1.2	0.5	-1.6	-1.7	-7.3	1.7	-3.7	1.1	-0.7	-1.7	1.2	-0.3	-1.0	-3.8	-3.8	-7.0	3.7	-0.8	-12.9	2.7
Transformation output	%	n/a	-8.6	-0.3	-0.6	-0.1	-2.3	0.4	-2.6	3.0	-2.5	2.8	-1.8	-0.1	4.4	3.2	1.8	0.0	-1.7	-1.7	-7.3	0.6	-2.2	1.3	-1.2	-1.6	3.0	0.6	0.9	-3.5	-1.2	-5.7	2.4	1.8	-9.3	6.2
Cons., losses in energy sector	%	n/a	-3.5	-3.4	5.4	-8.5	-5.5	1.4	1.3	0.4	-4.9	5.0	4.3	0.8	5.2	10.3	6.0	-2.6	2.0	-10.8	-7.6	-27.4	6.1	7.6	7.9	-17.0	14.3	3.1	8.5	1.3	-7.8	-11.8	0.4	-22.4	5.5	8.3
Non-energy consumption	%	n/a	-7.1	2.4	-2.7	8.7	-0.1	-1.1	6.3	3.3	-1.1	3.2	-3.4	1.4	0.7	0.8	2.8	-2.9	-2.2	-1.7	-5.7	7.8	-1.7	-3.4	-0.4	1.0	-6.1	4.9	3.8	-4.6	-2.3	0.6	5.1	-14.6	-16.8	10.3
Final energy consumption	%	n/a	-1.1	-2.5	1.2	-1.3	2.3	3.9	-1.6	-0.8	-1.7	-0.7	2.4	-2.4	1.5	-0.8	-1.6	3.8	-6.3	4.2	-5.5	7.2	-4.2	0.8	2.4	-5.4	2.4	1.5	1.1	-1.9	0.2	-6.7	4.2	-2.9	-5.1	-0.3
Mining, quarrying, manufact.	%	n/a	-9.5	-5.0	-5.0	1.3	0.4	-2.0	0.7	-1.8	-0.5	1.6	-2.3	-1.8	8.5	0.9	-2.9	2.9	3.3	-1.9	-11.4	13.8	2.7	-2.0	-0.9	-1.1	0.4	2.5	0.8	-2.6	-3.3	-4.3	7.3	-8.2	-7.7	0.3
Transport	%	n/a	2.1	3.9	2.9	-1.6	2.4	0.4	0.7	1.8	3.3	-1.1	-2.0	-1.0	-3.3	1.4	-0.9	3.5	-3.9	-1.5	-1.0	0.6	0.2	0.3	1.9	0.3	1.3	2.5	3.0	-1.7	0.3	-15.7	2.7	6.2	-0.9	-1.1
Private households	%	n/a	5.3	-3.3	7.5	-1.7	4.6	8.9	-1.3	-2.5	-6.1	-1.1	9.2	-4.7	2.3	-3.5	-1.8	2.0	-13.5	14.3	-4.5	7.3	-12.6	6.6	4.7	-14.3	4.3	2.6	-0.3	0.0	4.4	-1.4	4.1	-4.9	-6.9	-1.1
Services	%	n/a	0.1	-6.6	-1.2	-4.2	1.5	10.6	-8.5	-0.6	-4.1	-3.0	6.3	-1.7	-2.0	-2.3	-0.2	8.8	-13.8	9.4	-4.6	8.3	-8.3	-2.7	5.5	-7.0	4.8	-3.7	0.3	-4.4	-1.2	-2.4	1.6	-5.3	-5.6	1.7

3.1 Renewables' primary energy consumption

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Renewables' primary energy consumption in PJ																																				
Hydropower	PJ														66	75	71	72	76	74	69	75	64	78	83	71	68	74	73	65	72	67	71	63	72	81
Wind energy	PJ	58	53	62	64	67	83	73	77	80	91	127	124	145	69	94	100	113	146	149	142	139	179	186	190	211	290	288	380	396	453	476	419	447	510	500
Photovoltaics	PJ														1	2	5	8	11	16	24	43	72	96	110	128	137	135	140	160	163	178	182	220	230	271
Solarthermal energy	PJ														9	9	10	12	13	15	18	19	22	23	23	25	27	27	28	32	31	32	31	35	33	32
Geothermal energy	PJ	0	0	0	0	0	7	7	8	8	8	9	11	13	2	2	2	2	2	3	3	4	3	4	6	8	9	11	11	13	14	16	17	17	17	18
Ambient heat	PJ														9	9	10	12	14	17	20	23	26	29	32	35	37	40	44	47	51	56	62	72	86	71
Biomass	PJ														338	386	423	499	576	653	669	784	777	879	900	856	879	872	880	879	886	881	935	954	869	877
Renewable waste	PJ	139	145	145	164	186	185	189	259	291	304	280	297	297	63	65	89	102	114	102	97	107	109	116	130	134	132	136	140	135	134	135	136	132	130	129
Liquid Biofuels	PJ														31	41	80	144	166	131	117	127	125	129	117	121	112	112	113	118	116	147	128	129	133	115
Total	PJ	196	197	207	228	253	275	270	344	379	403	417	432	455	587	681	790	965	1,120	1,161	1,159	1,321	1,377	1,541	1,591	1,587	1,692	1,696	1,808	1,844	1,921	1,988	1,981	2,069	2,079	2,094
Renewables' primary energy consumption in mill. tce																																				
Hydropower	mill. tce														2.3	2.5	2.4	2.5	2.6	2.5	2.3	2.6	2.2	2.7	2.8	2.4	2.3	2.5	2.5	2.2	2.5	2.3	2.4	2.2	2.4	2.8
Wind energy	mill. tce	2.0	1.8	2.1	2.2	2.3	2.8	2.5	2.6	2.7	3.1	4.3	4.2	5.0	2.3	3.2	3.4	3.8	5.0	5.1	4.8	4.7	6.1	6.3	6.5	7.2	9.9	9.8	13.0	13.5	15.5	16.2	14.3	15.3	17.4	17.1
Photovoltaics	mill. tce														0.0	0.1	0.2	0.3	0.4	0.6	0.8	1.5	2.5	3.3	3.8	4.4	4.7	4.6	4.8	5.4	5.6	6.1	6.2	7.5	7.8	9.3
Solarthermal energy	mill. tce														0.3	0.3	0.4	0.4	0.5	0.6	0.7	0.8	0.8	0.8	0.9	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.1
Geothermal energy	mill. tce	0.0	0.0	0.0	0.0	0.0	0.2	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.4	0.4	0.5	0.5	0.6	0.6	0.6	0.6	0.6
Ambient heat	mill. tce														0.3	0.3	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.8	1.9	2.1	2.4	2.9	2.4
Biomass	mill. tce														11.5	13.2	14.4	17.0	19.7	22.3	22.8	26.8	26.5	30.0	30.7	29.2	30.0	29.8	30.0	30.0	30.2	30.0	31.9	32.5	29.6	29.9
Renewable waste	mill. tce	4.7	4.9	4.9	5.6	6.4	6.3	6.5	8.8	9.9	10.4	9.6	10.1	10.2	2.2	2.2	3.0	3.5	3.9	3.5	3.3	3.6	3.7	4.0	4.4	4.6	4.6	4.8	4.6	4.6	4.6	4.7	4.5	4.4	4.4	
Liquid Biofuels	mill. tce														1.0	1.4	2.7	4.9	5.7	4.5	4.0	4.3	4.3	4.4	4.0	4.1	3.8	3.8	3.9	4.0	4.0	4.4	4.4	4.4	4.5	3.9
Total	mill. tce	6.7	6.7	7.1	7.8	8.6	9.4	9.2	11.8	12.9	13.8	14.2	14.7	15.5	20.0	23.3	27.0	32.9	38.2	39.6	39.6	45.1	47.0	52.6	54.3	54.1	57.7	57.9	61.7	62.9	65.6	67.8	67.6	70.6	70.9	71.5
Renewables' primary energy consumption in %																																				
Hydropower	%														11.2	11.0	9.0	7.5	6.8	6.3	5.9	5.7	4.6	5.1	5.2	4.4	4.0	4.4	4.0	3.5	3.8	3.4	3.6	3.1	3.4	3.9
Wind energy	%	29.5	26.7	30.1	27.9	26.4	30.3	27.2	22.5	21.1	22.6	30.5	28.7	31.9	11.7	13.7	12.7	11.7	13.0	12.8	12.2	10.5	13.0	12.1	11.9	13.3	17.2	17.0	21.0	21.5	23.6	23.9	21.2	21.6	24.5	23.9
Photovoltaics	%														0.2	0.3	0.6	0.8	1.0	1.4	2.1	3.3	5.2	6.2	6.9	8.0	8.1	8.0	7.7	8.7	8.5	9.0	9.2	10.6	11.1	13.0
Solarthermal energy	%														1.5	1.3	1.3	1.3	1.2	1.3	1.6	1.5	1.6	1.5	1.5	1.6	1.6	1.6	1.7	1.6	1.6	1.6	1.6	1.7	1.6	1.5
Geothermal energy	%	0.0	0.0	0.0	0.0	0.0	2.5	2.7	2.2	2.2	2.1	2.2	2.6	2.7	0.3	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.4	0.5	0.7	0.6	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.9
Ambient heat	%														1.5	1.4	1.3	1.2	1.3	1.5	1.7	1.7	1.9	1.9	2.0	2.2	2.4	2.4	2.6	2.7	2.8	3.1	3.5	4.1	3.4	
Biomass	%														57.6	56.6	53.5	51.7	51.4	56.3	57.7	59.4	56.4	57.0	56.6	53.9	52.0	51.4	48.6	47.7	46.1	44.3	47.2	46.1	41.8	41.9
Renewable waste	%	70.5	73.3	69.9	72.1	73.6	67.2	70.1	75.3	76.7	75.3	67.3	68.7	65.3	10.8	9.5	11.3	10.6	10.2	8.8	8.4	8.1	7.9	7.6	8.2	8.4	7.8	8.0	7.7	7.3	7.0	6.8	6.9	6.4	6.3	6.1
Liquid Biofuels	%														5.2	6.0	10.2	15.0	14.9	11.3	10.1	9.6	9.1	8.4	7.3	7.6	6.6	6.6	6.3	6.4	6.0	7.4	6.5	6.2	6.4	5.5
Total	%	100.0																																		
Renewables' primary energy consumption, changes compared to the previous year in %																																				
Hydropower	%	n/a														13.2	-5.3	2.0	5.7	-3.4	-6.9	10.1	-15.7	23.1	5.7	-14.8	-3.1	8.3	-1.9	-10.2	11.3	-7.0	5.0	-10.3	12.9	13.0
Wind energy	%	n/a	-8.8	18.2	2.1	4.7	24.9	-12.0	5.7	3.2	14.1	39.1	-2.2	17.2	-6.6	36.3	6.7	12.8	29.3	2.2	-4.7	-2.2	29.3	3.7	2.0	10.9	37.8	-0.9	32.2	4.0	14.5	4.9	-11.9	6.7	14.1	-2.0
Photovoltaics	%	n/a														77.7	130.4	73.1	38.5	43.7	48.9	78.2	67.1	33.8	14.5	15.8	7.4	-1.4	3.2	14.4	2.0	9.5	2.0	21.3	4.4	18.0
Solarthermal energy	%	n/a														1.3	18.0	17.7	11.4	14.6	17.9	6.4	14.4	4.2	1.3	8.1	7.6	0.6	3.0	14.3	-3.2	4.0	-5.1	13.8	-6.3	-3.6
Geothermal energy	%	n/a	0.0	0.0	0.0	0.0	0.0	7.5	4.5	8.6	-0.3	11.5	22.6	10.3	53.3	7.3	18.8	-0.3	-0.6	40.3	10.5	17.6	-10.2	17.1	59.0	23.1	16.9	25.9	-4.6	18.1	10.4	11.9	6.4	4.5	-4.1	8.9
Ambient heat	%	n/a														5.7	7.7	16.7	20.4	18.8	16.6	13.9	13.4	12.3	10.5	8.9	7.8	7.6	8.2	8.6	8.3	9.3	11.4	14.7	20.0	-17.0
Biomass	%	n/a														14.0	9.6	18.0	15.4	13.4	2.3	17.3	-0.9	13.1	2.4	-4.9	2.8	-0.8	0.8	0.0	0.8	-0.6	6.2	2.0	-8.9	0.9
Renewable waste	%	n/a	4.4	0.2	13.4	13.4	-0.8	2.5	37.1	12.2	4.5	-7.7	5.8	0.2	45.4	2.1	37.2	14.7	12.1	-10.3	-4.9	9.5	2.2	6.7	11.4	3.2	-1.6	3.1	3.1	-3.8	-0.4	0.7	0.9	-3.2	-1.5	-1.1
Liquid Biofuels	%	n/a														32.4	97.8	80.1	15.2	-21.1	-10.6	8.3	-2.0	3.6	-9.5	3.4	-7.4	0.2	1.1	4.0	-1.7	26.6	-12.5	0.2	3.6	-13.3
Total	%	n/a	0.5	5.0	10.0	10.9	8.7	-1.8	27.7	10.1	6.4	3.3	3.8	5.4	29.0	16.0	15.9	22.1	16.1	3.7	-0.2	14.0	4.2	11.9	3.2	-0.3	6.6	0.2	6.6	2.0	4.2	3.5	-0.3	4.4	0.5	0.7

1990 - 2023: final data, 2024: provisional data
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4.1 Transformation input for electricity generation by energy source

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Transformation input for electricity generation by energy source in PJ																																					
Hard coal	PJ	1,270	1,354	1,285	1,323	1,308	1,332	1,370	1,281	1,365	1,273	1,268	1,231	1,200	1,230	1,182	1,161	1,234	1,259	1,083	942	1,012	961	1,007	1,115	1,041	981	939	755	670	472	353	442	528	322	224	
Lignite	PJ	1,796	1,679	1,617	1,532	1,505	1,455	1,433	1,392	1,346	1,335	1,420	1,507	1,537	1,507	1,487	1,458	1,433	1,475	1,416	1,369	1,364	1,410	1,495	1,473	1,432	1,421	1,376	1,357	1,332	1,037	839	1,000	1,041	793	729	
Petroleum	PJ	121	137	129	102	104	97	90	83	81	83	82	90	85	86	89	96	82	76	79	83	67	55	61	58	49	52	48	47	40	39	38	37	47	40	37	
Gases	PJ	422	404	358	349	400	418	443	462	477	471	469	477	494	526	540	591	629	656	705	619	689	649	586	529	481	487	613	646	624	671	696	675	585	564	599	
Natural gas, Petroleum gas	PJ	332	322	278	277	322	341	367	379	389	391	391	397	406	439	455	502	532	535	602	551	588	556	491	425	385	388	507	540	524	577	612	583	502	484	519	
Renewable Energy Sources	PJ	122	115	123	125	137	143	138	148	166	175	183	172	193	223	267	313	371	465	498	510	553	637	736	777	823	918	921	1,013	1,039	1,104	1,147	1,093	1,141	1,201	1,235	
Other energy sources	PJ	0	0	0	0	0	0	0	0	0	0	40	36	28	50	49	70	77	82	83	88	94	83	83	79	86	82	89	87	80	81	80	78	77	74	73	
Electricity	PJ	18	19	18	18	19	21	21	20	19	19	22	22	23	28	34	34	32	33	29	27	31	28	29	28	29	29	27	30	30	29	32	26	29	26	30	
Nuclear energy	PJ	1,663	1,608	1,732	1,674	1,649	1,681	1,763	1,858	1,763	1,855	1,851	1,868	1,798	1,800	1,822	1,779	1,826	1,533	1,623	1,472	1,533	1,178	1,085	1,061	1,060	1,001	923	833	829	819	702	754	379	79	0	
Total	PJ	5,413	5,316	5,264	5,123	5,123	5,148	5,258	5,244	5,218	5,211	5,335	5,403	5,357	5,449	5,469	5,502	5,684	5,579	5,516	5,111	5,343	5,000	5,082	5,120	5,001	4,972	4,935	4,768	4,644	4,252	3,887	4,104	3,827	3,100	2,927	
Transformation input for electricity generation by energy source in mill. tce																																					
Hard coal	mill. tce	43.3	46.2	43.9	45.1	44.6	45.5	46.7	43.7	46.6	43.4	43.3	42.0	40.9	42.0	40.3	39.6	42.1	43.0	37.0	32.2	34.5	32.8	34.4	38.1	35.5	33.5	32.0	25.8	22.8	16.1	12.0	15.1	18.0	11.0	7.7	
Lignite	mill. tce	61.3	57.3	55.2	52.3	51.4	49.6	48.9	47.5	45.9	45.5	48.4	51.4	52.4	51.4	50.7	49.7	48.9	50.3	48.3	46.7	46.5	48.1	51.0	50.2	48.9	48.5	46.9	46.3	45.5	35.4	28.6	34.1	35.5	27.1	24.9	
Petroleum	mill. tce	4.1	4.7	4.4	3.5	3.5	3.3	3.1	2.8	2.8	2.8	2.8	3.1	2.9	2.9	3.0	3.3	2.8	2.6	2.7	2.8	2.3	1.9	2.1	2.0	1.7	1.8	1.6	1.6	1.4	1.3	1.3	1.3	1.3	1.6	1.4	1.3
Gases	mill. tce	14.4	13.8	12.2	11.9	13.7	14.3	15.1	15.8	16.3	16.1	16.0	16.3	16.8	17.9	18.4	20.2	21.5	22.4	24.1	21.1	23.5	22.1	20.0	18.0	16.4	16.6	20.9	22.0	21.3	22.9	23.8	23.0	20.0	19.2	20.4	
Natural gas, Petroleum gas	mill. tce	11.3	11.0	9.5	9.4	11.0	11.6	12.5	12.9	13.3	13.3	13.3	13.6	13.8	15.0	15.5	17.1	18.1	18.3	20.5	18.8	20.1	19.0	16.7	14.5	13.2	13.2	17.3	18.4	17.9	19.7	20.9	19.9	17.1	16.5	17.7	
Renewable Energy Sources	mill. tce	4.2	3.9	4.2	4.3	4.7	4.9	4.7	5.0	5.7	6.0	6.3	5.9	6.6	7.6	9.1	10.7	12.7	15.9	17.0	17.4	18.9	21.7	25.1	26.5	28.1	31.3	31.4	34.6	35.4	37.7	39.1	37.3	38.9	41.0	42.1	
Other energy sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4	1.2	1.0	1.7	1.7	2.4	2.6	2.8	2.8	3.0	3.2	2.8	2.8	2.7	2.9	2.8	3.0	3.0	2.7	2.8	2.7	2.7	2.6	2.5	2.5	
Electricity	mill. tce	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.8	0.9	1.1	1.2	1.1	1.1	1.0	0.9	1.1	1.0	1.0	1.0	1.0	1.0	0.9	1.0	1.0	1.0	0.9	1.0	0.9	1.0	1.0	
Nuclear energy	mill. tce	56.8	54.9	59.1	57.1	56.3	57.4	60.2	63.4	60.2	63.3	63.1	63.7	61.3	61.4	62.2	60.7	62.3	52.3	55.4	50.2	52.3	40.2	37.0	36.2	36.2	34.2	31.5	28.4	28.3	27.9	24.0	25.7	12.9	2.7	0.0	
Total	mill. tce	184.7	181.4	179.6	174.8	174.8	175.7	179.4	178.9	178.0	177.8	182.0	184.4	182.8	185.9	186.6	187.7	193.9	190.4	188.2	174.4	182.3	170.6	173.4	174.7	170.6	169.7	168.4	162.7	158.5	145.1	132.6	140.0	130.6	105.8	99.9	
Transformation input for electricity generation by energy source in %																																					
Hard coal	%	23.5	25.5	24.4	25.8	25.5	25.9	26.1	24.4	26.2	24.4	23.8	22.8	22.4	22.6	21.6	21.1	21.7	22.6	19.6	18.4	18.9	19.2	19.8	21.8	20.8	19.7	19.0	15.8	14.4	11.1	9.1	10.8	13.8	10.4	7.7	
Lignite	%	33.2	31.6	30.7	29.9	29.4	28.3	27.3	26.5	25.8	25.6	26.6	27.9	28.7	27.7	27.2	26.5	25.2	26.4	25.7	26.8	25.5	28.2	29.4	28.8	28.6	28.6	27.9	28.5	28.7	24.4	21.6	24.4	27.2	25.6	24.9	
Petroleum	%	2.2	2.6	2.5	2.0	2.0	1.9	1.7	1.6	1.6	1.6	1.5	1.7	1.6	1.6	1.6	1.7	1.5	1.4	1.4	1.6	1.3	1.1	1.2	1.1	1.0	1.0	1.0	0.9	0.9	1.0	0.9	1.2	1.3	1.3	1.3	
Gases	%	7.8	7.6	6.8	6.8	7.8	8.1	8.4	8.8	9.1	9.0	8.8	8.8	9.2	9.6	9.9	10.7	11.1	11.8	12.8	12.1	12.9	13.0	11.5	10.3	9.6	9.8	12.4	13.5	13.4	15.8	17.9	16.4	15.3	18.2	20.5	
Natural gas, Petroleum gas	%	6.1	6.1	5.3	5.4	6.3	6.6	7.0	7.2	7.5	7.5	7.3	7.4	7.6	8.1	8.3	9.1	9.4	9.6	10.9	10.8	11.0	11.1	9.7	8.3	7.7	7.8	10.3	11.3	11.3	13.6	15.7	14.2	13.1	15.6	17.7	
Renewable Energy Sources	%	2.3	2.2	2.3	2.4	2.7	2.8	2.6	2.8	3.2	3.4	3.4	3.2	3.6	4.1	4.9	5.7	6.5	8.3	9.0	10.0	10.3	12.7	14.5	15.2	16.5	18.5	18.7	21.2	22.4	26.0	29.5	26.6	29.8	38.8	42.2	
Other energy sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.5	0.9	0.9	1.3	1.4	1.5	1.5	1.7	1.8	1.7	1.6	1.5	1.7	1.7	1.8	1.8	1.7	1.9	2.1	1.9	2.0	2.4	2.5	
Electricity	%	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.6	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	0.7	0.8	0.6	0.8	0.9	1.0	1.0	
Nuclear energy	%	30.7	30.3	32.9	32.7	32.2	32.7	33.5	35.4	33.8	35.6	34.7	34.6	33.6	33.0	33.3	32.3	32.1	27.5	29.4	28.8	28.7	23.6	21.4	20.7	21.2	20.1	18.7	17.5	17.9	19.3	18.1	18.4	9.9	2.5	0.0	
Total	%	100.0																																			
Transformation input for electricity generation by energy source, changes compared to the previous year in %																																					
Hard coal	%	n/a	6.6	-5.1	2.9	-1.1	1.8	2.8	-6.5	6.6	-6.7	-0.4	-2.9	-2.5	-3.9	-1.7	6.3	2.0	-14.0	-13.0	7.3	-5.0	4.8	10.7	-6.7	-5.8	-4.3	-19.6	-11.3	-29.4	-25.3	25.2	19.6	-39.1	-30.3		
Lignite	%	n/a	-6.5	-3.6	-5.3	-1.7	-3.4	-1.5	-2.8	-3.3	-0.8	6.4	6.2	2.0	-1.3	-2.0	-1.7	2.9	-4.0	-3.3	6.0	-1.5	-2.7	-0.8	-3.2	-1.4	-1.8	-22.2	-19.1	19.1	4.2	-23.8	-8.1	-8.1	-8.1		
Petroleum	%	n/a	12.7	-5.7	-20.7	1.3	-6.1	-7.6	-7.4	-2.5	2.2	-0.6	9.1	-5.3	1.4	2.4	8.7	-14.4	-8.1	4.3	5.2	-19.5	-17.6	10.1	-4.4	-15.0	4.5	-7.8	-0.3	-15.7	-3.1	-1.5	-2.3	25.5	-13.5	-8.6	
Gases	%	n/a	-4.3	-11.5	-2.5	14.7	4.6	5.9	4.2	3.4	-1.2	-0.4	1.6	3.5	6.5	2.7	9.5	6.5	4.4	7.5	-12.2	11.3	-5.9	-9.6	-9.8	-8.9	1.2	25.7	5.4	-3.3	7.4	3.8	-3.1	-13.3	-3.6	6.2	
Natural gas, Petroleum gas	%	n/a	-3.1	-13.7	-0.3	16.3	5.8	7.9	3.0	2.7	0.5	0.0	1.7	2.1	8.3	3.7	10.2	6.0	0.6	12.5	-8.4	6.6	-5.5	-11.7	-13.4	-9.3	0.6	30.8	6.5	-2.9	10.1	6.0	-4.8	-13.8	-3.5	7.1	
Renewable Energy Sources	%	n/a	-5.4	6.8	1.1	10.3	4.2	-3.7	6.9	12.7	5.5	4.6	-6.1	12.3	15.2	19.8	17.6	18.3	25.4	7.1	2.4																

4.2 Transformation input for district heating by energy source

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Transformation input for district heating by energy source in PJ																																					
Hard coal	PJ	93	110	110	115	115	104	114	100	103	97	96	110	108	162	165	139	126	121	126	124	139	131	136	129	110	114	104	101	100	87	62	71	67	52	42	
Lignite	PJ	219	156	129	98	81	64	54	43	41	28	32	29	30	38	60	43	41	41	43	43	41	39	41	43	38	40	37	33	31	28	26	30	28	24	18	
Petroleum	PJ	42	64	62	55	37	41	38	26	19	17	12	17	16	17	13	11	10	8	8	9	10	7	9	7	6	6	7	6	5	5	5	7	12	9	8	
Gases	PJ	116	125	119	123	152	168	193	173	178	178	178	193	203	273	256	268	259	244	244	226	253	227	220	218	190	194	213	218	208	210	208	232	198	201	211	
Natural gas, Petroleum gas	PJ	105	118	114	118	148	165	190	168	173	174	174	189	198	270	252	267	258	243	243	225	252	224	217	214	186	190	209	216	206	209	207	230	197	200	210	
Renewable Energy Sources	PJ	22	21	21	23	22	10	8	8	13	22	18	14	15	23	31	42	48	47	56	61	68	70	81	83	88	93	95	97	95	97	98	105	102	103	108	
Other energy sources	PJ	0	0	0	0	0	0	0	0	0	0	17	15	15	24	27	34	37	37	50	62	63	64	57	58	60	62	65	57	58	53	58	54	55	56		
Electricity	PJ	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
Nuclear energy	PJ	4	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	PJ	496	477	442	415	407	387	409	352	355	344	353	378	388	538	553	537	521	498	513	514	573	536	552	537	490	507	518	520	496	485	454	503	463	445	444	
Transformation input for district heating by energy source in mill. tce																																					
Hard coal	mill. tce	3.2	3.8	3.8	3.9	3.9	3.5	3.9	3.4	3.5	3.3	3.3	3.7	3.7	5.5	5.6	4.7	4.3	4.1	4.3	4.2	4.8	4.5	4.7	4.4	3.8	3.9	3.6	3.4	3.4	3.0	2.1	2.4	2.3	1.8	1.4	
Lignite	mill. tce	7.5	5.3	4.4	3.4	2.8	2.2	1.8	1.5	1.4	1.0	1.1	1.0	1.0	1.3	2.1	1.5	1.4	1.4	1.5	1.5	1.4	1.3	1.4	1.5	1.3	1.4	1.3	1.1	1.1	0.9	0.9	1.0	1.0	0.8	0.6	
Petroleum	mill. tce	1.4	2.2	2.1	1.9	1.3	1.4	1.3	0.9	0.6	0.6	0.4	0.6	0.5	0.6	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.4	0.3	0.3
Gases	mill. tce	4.0	4.3	4.1	4.2	5.2	5.7	6.6	5.9	6.1	6.1	6.1	6.6	6.9	9.3	8.7	9.2	8.8	8.3	8.3	7.7	8.6	7.7	7.5	7.4	6.5	6.6	7.3	7.4	7.1	7.2	7.1	7.9	6.8	6.9	7.2	
Natural gas, Petroleum gas	mill. tce	3.6	4.0	3.9	4.0	5.0	5.6	6.5	5.7	5.9	5.9	5.9	6.4	6.8	9.2	8.6	9.1	8.8	8.3	8.3	7.7	8.6	7.6	7.4	7.3	6.4	6.5	7.1	7.4	7.0	7.1	7.1	7.9	6.7	6.8	7.2	
Renewable Energy Sources	mill. tce	0.7	0.7	0.7	0.8	0.8	0.3	0.3	0.3	0.4	0.8	0.6	0.5	0.5	0.8	1.0	1.4	1.6	1.6	1.9	2.1	2.3	2.4	2.8	2.8	3.0	3.2	3.2	3.3	3.2	3.3	3.3	3.6	3.5	3.5	3.7	
Other energy sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.5	0.5	0.8	0.9	1.1	1.2	1.3	1.3	1.7	2.1	2.1	2.2	1.9	2.0	2.1	2.1	2.2	1.9	2.0	1.8	2.0	1.8	1.9	1.9	
Electricity	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Nuclear energy	mill. tce	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	mill. tce	16.9	16.3	15.1	14.2	13.9	13.2	13.9	12.0	12.1	11.7	12.0	12.9	13.2	18.4	18.9	18.3	17.8	17.0	17.5	17.5	19.6	18.3	18.8	18.3	16.7	17.3	17.7	17.7	16.9	16.5	15.5	17.2	15.8	15.2	15.2	
Transformation input for district heating by energy source in %																																					
Hard coal	%	18.7	23.1	24.9	27.8	28.1	26.8	28.0	28.6	29.0	28.3	27.1	29.0	28.0	30.2	29.9	25.9	24.2	24.3	24.6	24.2	24.3	24.4	24.7	24.1	22.6	22.4	20.1	19.3	20.1	17.8	13.8	14.0	14.6	11.7	9.3	
Lignite	%	44.1	32.8	29.1	23.7	19.9	16.7	13.1	12.2	11.6	8.1	9.0	7.7	7.8	7.1	10.9	8.1	8.0	8.2	8.3	8.4	7.2	7.3	7.5	8.0	7.8	7.9	7.1	6.4	6.3	5.7	5.8	6.0	6.1	5.4	4.2	
Petroleum	%	8.5	13.4	14.1	13.3	9.1	10.5	9.2	7.5	5.3	4.9	3.5	4.5	4.1	3.1	2.4	2.0	2.0	1.6	1.6	1.8	1.7	1.2	1.7	1.3	1.1	1.2	1.3	1.1	1.1	1.1	1.1	1.4	2.7	2.0	1.8	
Gases	%	23.4	26.3	27.0	29.6	37.3	43.3	47.3	49.2	50.1	51.8	50.4	51.0	52.3	50.7	46.3	50.0	49.6	49.0	47.5	44.0	44.1	42.3	39.9	40.6	38.8	38.2	41.1	41.9	41.9	43.4	45.9	46.1	42.8	45.2	47.5	
Natural gas, Petroleum gas	%	21.1	24.7	25.9	28.5	36.3	42.5	46.4	47.9	48.9	50.6	49.4	49.9	51.2	50.1	45.6	49.8	49.5	48.8	47.3	43.8	44.0	41.7	39.3	39.8	38.1	37.5	40.3	41.6	41.6	43.0	45.6	45.8	42.6	45.0	47.3	
Renewable Energy Sources	%	4.4	4.4	4.7	5.5	5.4	2.5	1.9	2.3	3.6	6.5	5.1	3.7	3.7	4.3	5.5	7.8	9.2	9.5	10.9	11.9	11.8	13.1	14.7	15.4	17.9	18.4	18.3	18.7	19.1	19.9	21.6	20.9	22.1	23.2	24.4	
Other energy sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.7	3.9	3.9	4.5	4.9	6.3	7.0	7.4	7.2	9.6	10.9	11.7	11.5	10.6	11.8	11.9	12.0	12.5	11.5	12.0	11.7	11.4	11.6	12.3	12.7	
Electricity	%	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.1	
Nuclear energy	%	0.9	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	%	100.0																																			
Transformation input for district heating by energy source, changes compared to the previous year in %																																					
Hard coal	%	n/a	18.5	0.0	4.9	-0.8	-9.3	10.0	-12.1	2.4	-5.5	-1.5	14.5	-1.1	49.8	2.0	-15.9	-9.3	-3.9	3.8	-1.3	11.9	-6.1	4.4	-5.3	-14.5	2.9	-8.3	-3.6	-0.7	-13.3	-27.9	13.2	-4.4	-22.6	-20.5	
Lignite	%	n/a	-28.4	-17.7	-23.8	-17.4	-20.5	-16.8	-20.2	-3.8	-32.2	12.9	-7.8	3.9	26.6	57.8	-28.2	-4.4	-1.0	3.6	1.9	-5.2	-4.3	5.1	4.3	-10.8	4.2	-7.9	-9.4	-6.1	-11.7	-5.3	14.6	-5.7	-15.0	-23.4	
Petroleum	%	n/a	50.9	-2.6	-11.8	-32.9	10.1	-7.1	-30.1	-29.4	-9.9	-26.9	39.1	-6.7	5.3	-20.4	-19.4	-4.3	-22.5	2.0	15.9	5.0	-32.9	37.8	-24.1	-19.9	9.3	13.5	-15.8	-9.7	1.6	-4.3	40.1	72.2	-29.5	-8.2	
Gases	%	n/a	8.1	-4.6	2.8	23.5	10.6	15.3	-10.5	2.8	0.3	-0.4	8.4	5.2	34.7	-6.3	4.9	-3.6	-5.6	-0.3	-7.1	11.8	-10.5	-2.9	-1.0	-12.8	2.0	10.0	2.3	-4.5	1.1	-0.9	11.3	-14.5	1.4	5.0	
Natural gas, Petroleum gas	%	n/a	12.4	-2.9	3.5	24.8	11.4	15.3	-11.3	3.0	0.3	0.0	8.4	5.1	36.0	-6.6	6.1	-3.5	-5.7	-0.3	-7.2	12.1	-11.4	-3.0	-1.3	-12.8	2.0	9.7	3.5	-4.4	1.0	-0.9	11.4	-14.3	1.4	5.0	
Renewable Energy Sources	%	n/a	-4.7	0.0	9.2	-3.3	-56.5	-17.2	2.7	54.9	78.0	-20.3	-21.4	3.3	58.4	33.0	36.2	15.2	-1.5	18.0	9.4	11.1	3.4	16.1	2.0	5.7	6.3	1.9	2.3	-2.7	2.2	1.3	7.3	-2.7	0.9	5.0	
Other energy sources	%	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-10.3	1.7	59.7	12.8	22.8	9.0	0.3	0.8	34.0	25.6	0.6	1.6	-10.7	1.8	4.5	2.7	4.4	-12.0	2.0	-8.5	8.1	-6.5	1.9	2.9	
Electricity	%	n/a	0.0	0.0	0.0	0.0	0.0	0.0	-100.0	0.0	-11.9	-52.2	-65.6	81.9	-100.0	0.0	0.																				

5.1 CHP plants: generation and energy input

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
		in TWh																																		
Total gross elec. generation (EB)	TWh	549.9	539.4	537.1	525.7	526.8	537.9	553.0	552.7	556.7	555.6	575.1	584.1	584.0	609.1	617.8	622.8	639.9	641.4	641.6	596.7	633.8	614.2	630.7	639.4	628.4	648.9	651.1	654.3	643.5	610.3	576.8	592.8	578.9	511.3	502.0
Power plant own use (EB)	TWh	41.4	39.1	38.7	38.1	38.2	38.4	39.1	38.8	38.8	38.1	38.0	38.4	36.6	39.6	39.6	40.2	40.9	40.5	40.0	37.6	38.9	37.3	38.3	38.3	37.6	38.7	36.9	35.6	34.7	31.0	27.7	29.3	28.4	23.5	21.8
Total net electr. generation (EB)	TWh	508.4	500.3	498.4	487.7	488.6	499.5	513.9	513.9	518.0	517.5	537.1	545.7	547.4	569.5	578.2	582.6	599.0	600.9	601.6	559.1	594.9	576.8	592.4	601.1	590.8	610.3	614.2	618.8	608.8	579.3	549.2	563.5	550.5	487.7	480.2
CHP net electr. generation	TWh	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	77.8	79.9	83.4	87.5	88.6	91.8	92.5	100.8	98.9	102.3	102.2	101.7	107.5	117.3	124.5	114.3	113.4	112.6	117.4	107.8	102.3	103.5
CHP net heat generation	TWh	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	183.0	186.5	190.1	192.9	192.9	197.2	196.6	212.8	203.4	209.7	211.8	205.9	214.6	222.4	224.6	229.2	225.6	219.5	227.2	211.9	196.5	196.8
Total CHP net generation	TWh	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	260.8	266.5	273.5	280.5	281.5	289.0	289.1	313.6	302.3	312.1	314.0	307.6	322.2	339.7	349.1	343.5	339.0	332.2	344.6	319.7	298.8	300.3
		in PJ																																		
Transformation input electr. (EB)	PJ	5,413	5,316	5,264	5,123	5,123	5,148	5,258	5,244	5,218	5,211	5,335	5,403	5,357	5,449	5,469	5,502	5,684	5,579	5,516	5,111	5,343	5,000	5,082	5,120	5,001	4,972	4,935	4,768	4,644	4,252	3,887	4,104	3,827	3,100	2,927
Transformation input CHP electr.	PJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	553	572	583	604	607	637	647	699	686	705	703	698	736	801	852	747	741	736	772	712	672	678
Transformation input CHP heat	PJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	669	689	693	699	693	720	722	777	742	759	768	743	769	798	806	796	786	766	797	746	694	698
Total transformation input CHP	PJ	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	1,222	1,261	1,277	1,303	1,301	1,357	1,369	1,476	1,428	1,464	1,471	1,441	1,505	1,599	1,657	1,543	1,526	1,503	1,569	1,458	1,366	1,377
		Efficiency in %																																		
Gross electricity generation (EB)	%	36.6	36.5	36.7	36.9	37.0	37.6	37.9	37.9	38.4	38.4	38.8	38.9	39.2	40.2	40.7	40.8	40.5	41.4	41.9	42.0	42.7	44.2	44.7	45.0	45.2	47.0	47.5	49.4	49.9	51.7	53.4	52.0	54.5	59.4	61.7
Total CHP net generation	%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	76.8	76.1	77.1	77.5	77.9	76.7	76.0	76.5	76.2	76.8	76.9	76.8	77.1	76.5	75.8	80.1	80.0	79.6	79.1	78.9	78.7	78.5
		CHP-share in %																																		
CHP-share net electr. generation	%	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a	13.7	13.8	14.3	14.6	14.7	15.3	16.6	16.9	17.1	17.3	17.0	17.2	17.6	19.1	20.1	18.8	19.6	20.5	20.8	19.6	21.0	21.5

1990 - 2023: final data, 2024: provisional data

5.2 Combined heat and power - Total

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Combined heat and power - Total - Net electricity generation in TWh																																				
Hard coal	TWh	n/a	19.8	18.9	15.7	14.2	12.8	13.1	13.3	15.3	13.9	13.6	14.5	12.6	11.9	11.7	14.4	11.3	9.7	8.8	9.5	9.1	6.8	5.4												
Lignite	TWh	n/a	4.8	5.1	5.1	5.1	5.1	5.1	5.0	5.4	5.4	5.7	6.0	5.2	5.3	5.3	5.0	4.7	4.2	3.4	3.8	3.4	2.6	2.1												
Petroleum	TWh	n/a	4.3	3.8	3.8	3.5	3.5	2.9	2.6	2.5	2.1	2.4	2.3	2.1	2.2	2.2	2.1	1.9	1.9	1.9	2.7	2.1	2.0													
Gases	TWh	n/a	42.3	44.3	48.9	52.0	51.4	53.7	51.1	54.5	53.2	52.5	51.0	50.1	54.2	62.9	66.4	60.4	61.9	62.3	65.1	55.1	54.9	57.8												
Renewable Energy Sources	TWh	n/a	4.2	5.3	7.0	9.7	12.9	14.3	17.9	20.0	21.4	24.9	25.4	28.1	30.6	31.6	32.6	32.3	32.5	33.2	33.9	34.3	33.0	33.2												
Other energy sources	TWh	n/a	2.4	2.5	3.0	3.0	2.8	2.7	2.7	3.1	2.9	3.2	3.1	3.6	3.4	3.6	3.9	3.6	3.2	3.1	3.2	3.1	2.9	3.0												
Total	TWh	n/a	77.8	79.9	83.4	87.5	88.6	91.8	92.5	100.8	98.9	102.3	102.2	101.7	107.5	117.3	124.5	114.3	113.4	112.6	117.4	107.8	102.3	103.5												
Combined heat and power - Total - Net heat generation in TWh																																				
Hard coal	TWh	n/a	44.7	43.4	40.3	38.2	35.0	36.1	34.4	37.4	33.5	33.1	35.7	30.9	32.2	31.4	30.0	31.7	27.7	23.2	25.2	23.7	17.3	13.7												
Lignite	TWh	n/a	16.0	15.8	16.4	16.7	16.2	16.6	16.3	17.4	17.7	18.4	18.9	17.5	18.0	18.0	16.6	15.5	13.8	12.5	13.2	12.3	10.1	8.5												
Petroleum	TWh	n/a	13.7	13.1	12.4	12.9	12.0	10.4	10.3	10.4	8.8	11.5	10.8	9.5	9.9	9.8	9.9	10.3	10.3	9.8	9.7	13.0	11.4	10.9												
Gases	TWh	n/a	86.1	88.9	92.0	92.0	92.2	93.2	90.1	95.8	91.4	91.1	89.2	87.6	90.2	99.4	102.5	103.3	105.1	105.8	106.8	91.5	88.9	93.4												
Renewable Energy Sources	TWh	n/a	12.3	15.4	19.1	22.6	26.8	29.9	34.0	39.0	39.5	43.0	44.6	46.3	49.1	48.6	50.4	52.5	53.0	53.1	55.6	55.5	54.3	55.1												
Other energy sources	TWh	n/a	10.2	10.0	9.9	10.5	10.8	11.0	11.5	12.8	12.5	12.8	12.6	14.0	15.1	15.1	15.2	16.0	15.7	15.0	16.7	15.8	14.5	15.3												
Total	TWh	n/a	183.0	186.5	190.1	192.9	192.9	197.2	196.6	212.8	203.4	209.7	211.8	205.9	214.6	222.4	224.6	229.2	225.6	219.5	227.2	211.9	196.5	196.8												
Combined heat and power - Total - Transformation input in PJ																																				
Hard coal	PJ	n/a	321	305	263	238	211	225	222	241	218	216	231	199	199	195	215	193	167	145	157	148	109	87												
Lignite	PJ	n/a	95	99	101	100	97	100	97	106	107	112	116	104	106	106	98	92	83	73	78	71	58	47												
Petroleum	PJ	n/a	80	75	73	74	67	64	63	61	55	62	56	51	50	52	51	52	53	50	51	67	57	57												
Gases	PJ	n/a	577	610	630	643	636	653	635	669	648	637	619	610	646	727	757	698	718	724	754	647	633	667												
Renewable Energy Sources	PJ	n/a	89	115	143	181	214	242	273	308	315	346	358	377	402	409	423	414	415	425	435	434	424	428												
Other energy sources	PJ	n/a	60	57	67	67	75	73	79	90	85	91	90	100	101	109	114	95	90	85	94	91	86	90												
Total	PJ	n/a	1,222	1,261	1,277	1,303	1,301	1,357	1,369	1,476	1,428	1,464	1,471	1,441	1,505	1,599	1,657	1,543	1,526	1,503	1,569	1,458	1,366	1,377												
for CHP electricity generation	PJ	n/a	553	572	583	604	607	637	647	699	686	705	703	698	736	801	852	747	741	736	772	712	672	678												
Combined heat and power - Total - Efficiency in %																																				
Hard coal	%	n/a	72.3	73.4	76.8	79.2	81.5	78.8	77.2	78.6	78.4	78.0	78.0	78.5	79.6	74.3	80.2	80.8	79.5	79.7	80.1	79.6	79.1													
Lignite	%	n/a	78.5	76.2	76.4	78.7	78.8	77.9	78.5	77.8	78.0	77.8	77.3	78.9	79.1	79.2	79.7	79.5	78.4	78.5	78.9	79.7	79.0	80.2												
Petroleum	%	n/a	81.0	81.0	79.8	80.2	82.8	74.7	74.1	75.3	71.2	81.2	84.5	82.7	86.5	83.4	84.7	84.8	81.9	83.7	82.0	83.9	85.0	81.1												
Gases	%	n/a	80.1	78.7	80.6	80.6	81.3	81.0	80.1	80.8	80.4	81.1	81.6	81.3	80.5	80.3	80.4	84.4	83.7	83.6	82.1	81.6	81.8	81.6												
Renewable Energy Sources	%	n/a	67.0	64.5	65.4	64.1	66.7	65.7	68.5	68.9	69.6	70.5	70.3	71.0	71.3	70.6	70.6	73.7	74.1	73.1	74.1	74.4	74.2	74.2												
Other energy sources	%	n/a	76.3	79.3	69.2	73.0	65.3	67.7	64.7	63.5	65.0	62.9	62.5	63.2	66.3	61.5	60.5	74.5	75.6	76.3	75.9	75.2	72.8	73.4												
Total	%	n/a	76.8	76.1	77.1	77.5	77.9	76.7	76.0	76.5	76.2	76.8	76.9	76.8	77.1	76.5	75.8	80.1	80.0	79.6	79.1	78.9	78.7	78.5												

1990 - 2023: final data, 2024: provisional data

Combined heat and power - Total: Main activity producer plants, Autoproducer plants and Other producer plants (below 1 MWel)

5.3 Combined heat and power - Main activity producers

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Combined heat and power - Main activity producers - Net electricity generation in TWh																																				
Hard coal	TWh	n/a	17.2	16.9	13.9	12.4	11.1	11.2	11.6	13.5	12.2	12.8	13.7	11.8	11.2	10.4	13.0	10.1	8.7	7.2	8.0	7.6	5.8	4.6												
Lignite	TWh	n/a	3.6	3.8	3.9	3.7	3.7	3.8	3.8	4.1	4.0	4.2	4.5	3.8	4.0	4.0	3.7	3.4	3.0	2.4	3.0	2.6	2.0	1.5												
Petroleum	TWh	n/a	0.4	0.4	0.5	0.3	0.2	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.0												
Gases	TWh	n/a	27.4	29.2	31.8	34.9	34.0	35.3	31.2	31.5	30.1	28.9	25.9	22.6	22.6	29.2	30.6	28.8	30.2	30.6	32.7	27.1	28.3	29.9												
Renewable Energy Sources	TWh	n/a	0.8	1.0	1.2	1.4	1.6	2.0	2.3	2.5	2.6	3.0	3.7	4.3	4.9	5.1	5.5	7.1	7.1	7.5	7.9	8.3	8.1	8.5												
Other energy sources	TWh	n/a	1.0	1.0	1.2	1.3	1.4	1.4	1.5	1.7	1.9	2.0	1.9	2.3	2.2	2.4	2.7	2.3	2.2	1.9	2.0	1.9	1.9	2.0												
Total	TWh	n/a	50.3	52.3	52.3	54.0	51.9	53.8	50.5	53.4	51.1	51.1	49.7	44.9	44.9	51.2	55.5	51.9	51.2	49.6	53.7	47.8	46.2	46.5												
Combined heat and power - Main activity producers - Net heat generation in TWh																																				
Hard coal	TWh	n/a	34.7	36.5	33.0	31.1	28.5	29.8	28.7	31.1	27.6	29.0	31.9	27.2	28.2	26.1	24.6	26.5	23.2	17.1	19.1	18.4	14.3	11.1												
Lignite	TWh	n/a	9.8	9.8	10.2	10.1	9.6	10.0	10.1	10.3	10.1	10.4	11.2	9.8	10.5	10.1	9.0	8.0	7.1	6.7	7.8	7.3	6.2	4.7												
Petroleum	TWh	n/a	1.2	1.0	0.8	0.6	0.4	0.3	0.5	0.5	0.3	0.4	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.3	0.7	0.3	0.1												
Gases	TWh	n/a	41.6	45.7	47.5	50.1	48.2	47.7	43.7	44.9	40.4	40.6	36.5	32.4	32.5	38.1	40.2	42.1	44.5	45.0	45.7	38.5	38.9	41.2												
Renewable Energy Sources	TWh	n/a	2.7	3.3	4.1	4.6	5.2	6.1	6.7	7.3	7.8	8.4	9.9	10.8	11.6	11.8	12.2	16.2	16.7	17.1	18.2	18.2	18.0	18.4												
Other energy sources	TWh	n/a	3.8	3.9	4.5	4.8	4.8	4.8	5.8	6.8	6.8	7.1	7.0	8.0	7.9	8.2	8.4	9.4	10.2	9.0	10.0	9.0	9.2	9.6												
Total	TWh	n/a	93.9	100.1	100.1	101.4	96.7	98.7	95.4	100.9	93.1	95.9	96.9	88.5	91.0	94.5	94.5	102.4	101.9	95.0	101.1	92.0	86.9	85.1												
Combined heat and power - Main activity producers - Transformation input in PJ																																				
Hard coal	PJ	n/a	265	266	221	197	174	186	186	202	183	193	210	179	177	163	183	163	141	110	122	116	90	71												
Lignite	PJ	n/a	63	66	66	65	63	65	64	68	66	69	73	63	66	64	57	52	46	41	49	45	37	28												
Petroleum	PJ	n/a	7	7	6	4	3	2	4	4	4	3	2	2	2	2	2	1	1	1	2	5	2	1												
Gases	PJ	n/a	316	337	351	367	357	366	335	342	323	313	279	246	245	303	315	300	317	316	338	285	290	304												
Renewable Energy Sources	PJ	n/a	22	26	37	41	45	54	58	64	67	73	87	96	102	109	114	122	121	126	133	133	131	136												
Other energy sources	PJ	n/a	24	24	35	36	38	40	47	56	56	59	60	68	66	73	77	65	64	58	64	58	59	61												
Total	PJ	n/a	697	726	715	711	680	713	693	735	700	710	711	653	658	715	748	704	690	653	708	642	609	601												
for CHP electricity generation	PJ	n/a	356	367	358	359	345	363	348	369	358	358	351	320	318	360	392	345	336	322	353	317	303	303												
Combined heat and power - Main activity producers - Efficiency in %																																				
Hard coal	%	n/a	70.4	72.4	76.5	79.5	82.0	79.2	77.8	79.2	78.2	77.9	78.1	78.6	80.0	80.5	74.0	81.0	81.6	79.3	79.7	80.2	80.7	80.0												
Lignite	%	n/a	76.7	74.1	76.1	76.8	76.2	76.7	77.6	76.3	76.7	76.0	77.7	77.8	78.7	79.2	78.3	78.8	79.5	79.3	79.2	79.8	79.8	79.4												
Petroleum	%	n/a	82.6	71.0	80.7	78.0	69.2	68.5	66.6	67.3	60.1	71.9	70.6	68.0	63.1	63.3	64.6	75.4	77.8	79.2	74.9	74.7	75.7	74.2												
Gases	%	n/a	78.7	80.0	81.4	83.3	82.8	81.6	80.5	80.4	78.6	80.1	80.6	80.5	81.0	79.9	80.9	85.1	84.9	86.1	83.5	83.0	83.6	84.2												
Renewable Energy Sources	%	n/a	58.0	59.9	52.1	52.8	54.1	54.2	55.7	54.9	55.5	56.5	56.4	56.9	58.2	55.9	55.8	68.5	70.7	70.1	70.7	71.8	71.5	71.3												
Other energy sources	%	n/a	71.6	73.1	58.4	61.0	58.7	56.0	56.2	55.3	55.9	55.3	53.2	54.8	55.6	52.2	51.9	64.6	69.4	67.0	67.7	67.1	67.6	67.9												
Total	%	n/a	74.5	75.6	76.8	78.7	78.7	77.0	75.7	75.5	74.2	74.6	74.2	73.5	74.4	73.4	72.2	78.9	79.9	79.7	78.7	78.4	78.7	78.9												

1990 - 2023: final data, 2024: provisional data
Source: EEFA according to DESTATIS

5.4 Combined heat and power - Autoproducers

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Combined heat and power - Autoproducers - Net electricity generation in TWh																																				
Hard coal	TWh	n/a	2.6	1.9	1.9	1.9	1.7	1.8	1.7	1.9	1.7	0.8	0.8	0.8	0.7	1.3	1.4	1.2	1.0	1.6	1.6	1.6	1.0	0.8												
Lignite	TWh	n/a	1.2	1.3	1.2	1.4	1.4	1.3	1.2	1.4	1.4	1.5	1.4	1.3	1.3	1.3	1.3	1.2	1.0	0.9	0.8	0.6	0.5													
Petroleum	TWh	n/a	3.6	3.1	3.0	3.0	3.1	2.6	2.2	2.1	1.6	2.1	2.1	1.9	2.0	2.0	1.9	1.8	1.8	1.8	2.3	1.9	1.8													
Gases	TWh	n/a	13.6	13.8	15.7	15.6	15.8	16.7	17.8	20.5	19.9	19.7	20.4	21.3	24.6	26.0	27.8	24.6	24.7	24.7	25.8	21.4	20.1	21.4												
Renewable Energy Sources	TWh	n/a	1.1	1.4	2.1	2.3	2.3	2.0	2.5	2.7	2.7	2.9	3.0	3.1	3.3	3.4	3.4	3.0	3.3	3.4	3.2	3.4	3.4	3.3												
Other energy sources	TWh	n/a	1.4	1.4	1.7	1.6	1.4	1.3	1.1	1.3	1.1	1.2	1.2	1.2	1.2	1.3	1.2	1.0	1.2	1.2	1.2	1.0	1.0													
Total	TWh	n/a	23.5	22.9	25.6	25.8	25.8	25.7	26.6	29.8	28.4	28.3	28.9	29.7	33.1	35.3	37.1	33.2	33.0	33.7	34.3	30.6	27.9	28.9												
Combined heat and power - Autoproducers - Net heat generation in TWh																																				
Hard coal	TWh	n/a	10.1	6.9	7.3	7.1	6.4	6.4	5.7	6.3	5.9	4.1	3.7	3.7	4.0	5.3	5.5	5.2	4.5	6.2	6.1	5.3	3.0	2.6												
Lignite	TWh	n/a	6.1	6.1	6.2	6.6	6.6	6.6	6.2	7.2	7.6	8.0	7.7	7.7	7.5	8.0	7.7	7.5	6.7	5.9	5.4	5.0	4.0	3.8												
Petroleum	TWh	n/a	11.9	11.6	11.1	11.9	11.3	9.7	9.4	9.5	8.2	10.8	10.2	9.0	9.5	9.3	9.5	9.8	9.9	9.5	9.2	12.1	10.8	10.4												
Gases	TWh	n/a	42.6	41.2	42.5	39.8	41.6	42.7	43.3	47.1	46.2	44.6	45.4	45.9	47.3	49.9	50.3	50.8	50.8	51.1	52.0	43.7	41.0	43.3												
Renewable Energy Sources	TWh	n/a	5.0	5.8	7.6	7.5	8.2	8.1	9.0	10.9	10.9	11.0	12.1	11.5	11.6	11.5	12.3	11.3	11.2	11.0	11.3	12.0	11.7	12.1												
Other energy sources	TWh	n/a	6.3	5.9	5.2	5.4	5.8	6.0	5.6	5.9	5.6	5.7	5.6	6.0	7.2	6.9	6.8	6.6	5.5	6.0	6.7	6.8	5.3	5.7												
Total	TWh	n/a	82.0	77.5	80.0	78.3	79.8	79.5	79.3	86.9	84.4	84.1	84.8	83.8	87.2	90.9	92.0	91.3	88.7	89.6	90.6	85.1	75.8	78.0												
Combined heat and power - Autoproducers - Transformation input in PJ																																				
Hard coal	PJ	n/a	56	40	42	41	37	39	36	39	34	23	21	21	22	32	32	30	26	35	34	31	19	16												
Lignite	PJ	n/a	32	33	35	35	34	35	33	38	41	42	43	40	40	42	40	39	36	32	29	26	21	19												
Petroleum	PJ	n/a	69	65	64	67	62	59	57	55	50	57	52	47	47	48	48	49	51	48	47	61	53	54												
Gases	PJ	n/a	248	256	264	261	261	267	278	300	291	283	289	297	327	343	356	319	324	329	340	285	267	288												
Renewable Energy Sources	PJ	n/a	28	37	48	52	54	54	57	67	67	69	74	71	73	73	76	66	68	70	69	73	72	72												
Other energy sources	PJ	n/a	35	31	30	28	35	32	31	33	29	32	30	32	35	37	29	26	27	30	32	27	28													
Total	PJ	n/a	469	462	484	484	484	487	492	533	512	506	510	509	544	574	590	533	531	540	509	459	478													
for CHP electricity generation	PJ	n/a	168	169	186	189	187	188	194	212	201	199	202	207	232	249	261	220	222	228	234	210	191	200												
Combined heat and power - Autoproducers - Efficiency in %																																				
Hard coal	%	n/a	80.9	80.5	78.2	77.9	79.5	76.6	74.5	75.5	79.1	78.7	76.8	77.9	76.7	75.3	76.1	75.8	76.6	79.8	79.7	79.6	74.5	75.0												
Lignite	%	n/a	82.2	80.6	77.1	82.2	83.6	80.1	80.1	80.4	80.1	80.7	76.8	80.7	79.9	80.4	81.1	77.9	77.1	78.2	80.6	77.6	81.3													
Petroleum	%	n/a	80.7	81.9	79.5	80.1	83.4	74.5	74.2	75.5	71.4	81.5	85.1	83.2	87.3	84.4	85.4	85.5	82.3	84.2	82.6	84.8	85.7	81.5												
Gases	%	n/a	81.4	77.2	79.2	76.5	79.0	80.0	79.2	81.0	81.8	81.7	82.0	81.3	79.3	79.7	79.0	85.2	84.0	83.1	82.4	82.2	82.4	81.0												
Renewable Energy Sources	%	n/a	78.8	69.6	72.2	68.3	70.2	67.2	72.0	73.1	73.2	72.8	73.2	74.6	73.1	74.0	74.7	78.1	76.9	74.1	75.4	76.3	75.5	77.0												
Other energy sources	%	n/a	79.9	84.8	82.8	89.2	73.0	82.9	77.8	77.7	82.7	77.0	81.1	80.5	86.4	80.0	78.4	96.5	91.1	96.6	93.2	90.1	84.5	85.4												
Total	%	n/a	81.0	78.3	78.5	77.4	78.5	77.8	77.4	78.8	79.4	80.0	80.3	80.3	79.5	79.2	78.8	84.1	82.5	82.1	81.7	81.9	81.3	80.5												

1990 - 2023: final data, 2024: provisional data
Source: EEFA according to DESTATIS

5.5 Combined heat and power - Other producers

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Combined heat and power - Other producers - Net electricity generation in TWh																																						
Hard coal	TWh	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0															
Lignite	TWh	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0														
Petroleum	TWh	n/a	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1														
Gases	TWh	n/a	1.3	1.4	1.4	1.5	1.6	1.8	2.0	2.5	3.1	3.8	4.7	6.3	7.0	7.7	8.1	7.0	7.0	7.0	6.6	6.6	6.6	6.5														
Renewable Energy Sources	TWh	n/a	2.3	2.9	3.7	5.9	9.0	10.2	13.2	14.8	16.0	19.0	18.7	20.7	22.4	23.1	23.7	22.1	22.1	22.3	22.7	22.6	21.5	21.4														
Other energy sources	TWh	n/a	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0														
Total	TWh	n/a	4.0	4.6	5.5	7.8	10.9	12.3	15.5	17.6	19.3	22.9	23.6	27.1	29.5	30.8	31.8	29.2	29.3	29.4	29.4	28.2	28.0															
Combined heat and power - Other producers - Net heat generation in TWh																																						
Hard coal	TWh	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0														
Lignite	TWh	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
Petroleum	TWh	n/a	0.5	0.5	0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3													
Gases	TWh	n/a	1.9	2.0	2.1	2.2	2.4	2.7	3.1	3.8	4.8	5.9	7.3	9.3	10.4	11.5	12.0	10.3	9.7	9.8	9.1	9.3	8.9	8.9														
Renewable Energy Sources	TWh	n/a	4.6	6.3	7.3	10.4	13.4	15.7	18.4	20.8	20.9	23.5	22.6	24.0	25.9	25.3	26.0	25.0	25.1	25.0	26.1	25.3	24.6	24.5														
Other energy sources	TWh	n/a	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0														
Total	TWh	n/a	7.1	8.9	10.0	13.2	16.4	18.9	21.9	25.1	26.0	29.6	30.1	33.6	36.5	36.9	38.1	35.5	35.0	35.0	35.5	34.9	33.8	33.7														
Combined heat and power - Other producers - Transformation input in PJ																																						
Hard coal	PJ	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0														
Lignite	PJ	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Petroleum	PJ	n/a	3	3	3	3	3	3	2	2	2	2	2	1	1	1	1	2	1	1	1	1	1	2	2													
Gases	PJ	n/a	13	16	15	15	17	19	22	27	34	41	51	67	74	82	86	79	78	80	76	77	76	76	76													
Renewable Energy Sources	PJ	n/a	39	53	58	88	115	134	158	177	180	205	197	211	227	228	233	226	226	229	233	229	220	220	220													
Other energy sources	PJ	n/a	1	1	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0													
Total	PJ	n/a	56	73	78	108	137	157	184	208	216	248	250	279	302	310	320	306	305	310	310	308	298	298														
for CHP electricity generation	PJ	n/a	28	36	39	56	75	86	105	118	127	148	150	171	185	192	198	182	183	185	185	185	178	176	176													
Combined heat and power - Other producers - Efficiency in %																																						
Hard coal	%	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0														
Lignite	%	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0													
Petroleum	%	n/a	85.1	85.0	85.0	85.1	85.0	85.0	84.9	85.2	84.9	84.8	85.0	84.8	85.1	84.9	85.0	70.2	68.1	71.8	73.3	74.3	75.5	74.3	74.3													
Gases	%	n/a	88.7	75.0	86.1	86.0	84.6	84.3	84.2	84.4	84.6	84.7	84.7	84.2	84.5	84.4	84.4	78.9	77.6	75.7	74.4	74.7	73.1	73.3	73.3													
Renewable Energy Sources	%	n/a	63.6	63.2	68.1	67.1	70.1	69.7	71.8	72.5	73.6	74.7	75.4	76.2	76.6	76.5	76.5	75.2	75.2	74.5	75.6	75.3	75.4	75.1	75.1													
Other energy sources	%	n/a	60.8	62.9	50.7	57.2	55.4	54.5	54.7	53.0	54.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0												
Total	%	n/a	70.7	66.8	71.7	70.1	72.0	71.7	73.4	74.0	75.4	76.5	77.3	78.2	78.6	78.7	76.1	75.8	74.8	75.3	75.2	74.8	74.7	74.7														

1990 - 2023: final data, 2024: provisional data

Other producers: plant-capacity below 1 MWel

Source: EEFA according to DESTATIS, AGEE-Stat, Öko-Institut

6.1 Total final energy consumption by energy source

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Total final energy consumption by energy source in PJ																																						
Hard coal	PJ	571	532	483	428	446	455	447	460	390	393	432	409	398	370	339	306	339	348	330	269	355	353	340	338	348	382	378	366	360	339	277	375	311	279	289		
Lignite	PJ	975	555	353	295	221	178	165	130	104	94	82	77	70	75	81	78	81	78	87	79	89	94	92	93	85	84	87	88	86	79	90	86	81	66	63		
Petroleum	PJ	4,061	4,328	4,376	4,505	4,396	4,402	4,545	4,465	4,431	4,291	4,148	4,257	4,063	3,927	3,803	3,734	3,852	3,288	3,562	3,420	3,443	3,335	3,353	3,479	3,350	3,388	3,441	3,510	3,374	3,456	3,025	2,920	3,080	3,008	2,970		
Gases	PJ	1,789	1,915	1,913	2,011	2,025	2,163	2,399	2,306	2,327	2,323	2,328	2,436	2,392	2,314	2,290	2,244	2,319	2,206	2,284	2,115	2,350	2,149	2,180	2,285	2,056	2,162	2,227	2,244	2,215	2,207	2,155	2,354	2,105	1,942	1,922		
Natural gas, Petroleum gas	PJ	1,541	1,688	1,724	1,851	1,882	2,025	2,273	2,169	2,195	2,201	2,204	2,324	2,290	2,210	2,178	2,133	2,203	2,110	2,179	2,033	2,245	2,035	2,076	2,184	1,955	2,055	2,130	2,150	2,107	2,107	2,062	2,262	2,011	1,831	1,822		
Renewable Energy Sources	PJ	54	44	44	54	68	110	111	175	186	192	201	231	232	333	372	425	532	593	591	570	681	648	698	708	653	656	656	674	689	698	720	761	803	754	731		
Other energy sources	PJ	0	0	0	0	0	0	0	0	0	0	0	0	62	76	76	29	20	35	62	74	72	96	77	61	65	63	66	66	77	77	72	79	81	74	73		
Electricity	PJ	1,638	1,615	1,602	1,587	1,605	1,648	1,674	1,690	1,709	1,718	1,780	1,778	1,801	1,858	1,882	1,882	1,901	1,912	1,906	1,796	1,921	1,895	1,892	1,881	1,842	1,854	1,863	1,867	1,845	1,800	1,742	1,802	1,723	1,635	1,664		
District heat	PJ	383	378	356	355	349	366	344	309	310	290	265	268	270	429	449	446	444	427	436	428	472	420	429	435	383	402	410	411	405	408	381	442	379	365	384		
Total	PJ	9,472	9,366	9,127	9,234	9,110	9,322	9,686	9,535	9,458	9,300	9,235	9,455	9,226	9,367	9,292	9,144	9,489	8,887	9,258	8,750	9,383	8,990	9,061	9,280	8,782	8,990	9,128	9,226	9,051	9,065	8,462	8,820	8,563	8,123	8,095		
Total final energy consumption by energy source in mill. tce																																						
Hard coal	mill. tce	19.5	18.1	16.5	14.6	15.2	15.5	15.3	15.7	13.3	13.4	14.7	14.0	13.6	12.6	11.6	10.4	11.6	11.9	11.3	9.2	12.1	12.0	11.6	11.5	11.9	13.0	12.9	12.5	12.3	11.6	9.5	12.8	10.6	9.5	9.9		
Lignite	mill. tce	33.3	18.9	12.0	10.0	7.5	6.1	5.6	4.5	3.6	3.2	2.8	2.6	2.4	2.6	2.8	2.6	2.8	2.7	3.0	2.7	3.0	3.2	3.2	3.2	2.9	2.8	3.0	3.0	2.9	2.7	3.1	2.9	2.8	2.2	2.1		
Petroleum	mill. tce	138.6	147.7	149.3	153.7	150.0	150.2	155.1	152.3	151.2	146.4	141.5	145.2	138.6	134.0	129.8	127.4	131.4	112.2	121.5	116.7	117.5	113.8	114.4	118.7	114.3	115.6	117.4	119.8	115.1	117.9	103.2	99.6	105.1	102.6	101.3		
Gases	mill. tce	61.0	65.3	65.3	68.6	69.1	73.8	81.9	78.7	79.4	79.3	79.4	83.1	81.6	79.0	78.1	76.6	79.1	75.3	77.9	72.2	80.2	73.3	74.4	78.0	70.1	73.8	76.0	76.6	75.6	75.3	73.5	80.3	71.8	66.3	65.6		
Natural gas, Petroleum gas	mill. tce	52.6	57.6	58.8	63.2	64.2	69.1	77.5	74.0	74.9	75.1	75.2	79.3	78.1	75.4	74.3	72.8	75.2	72.0	74.4	69.4	76.6	69.4	70.8	74.5	66.7	70.1	72.7	73.3	71.9	71.9	70.4	77.2	68.6	62.5	62.2		
Renewable Energy Sources	mill. tce	1.8	1.5	1.5	1.8	2.3	3.8	3.8	6.0	6.4	6.5	6.8	7.9	7.9	11.3	12.7	14.5	18.2	20.2	20.2	19.4	23.2	22.1	23.8	24.2	22.3	22.4	22.4	23.0	23.5	23.8	24.6	26.0	27.4	25.7	24.9		
Other energy sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.6	1.0	0.7	1.2	2.1	2.5	2.5	3.3	2.6	2.1	2.2	2.1	2.2	2.3	2.6	2.6	2.4	2.7	2.8	2.5	2.5		
Electricity	mill. tce	55.9	55.1	54.7	54.1	54.7	56.2	57.1	57.7	58.3	58.6	60.7	60.6	61.5	63.4	64.2	64.2	64.9	65.2	65.0	61.3	65.6	64.7	64.5	64.2	62.8	63.3	63.6	63.7	63.0	61.4	59.4	61.5	58.8	55.8	56.8		
District heat	mill. tce	13.1	12.9	12.1	12.1	11.9	12.5	11.7	10.5	10.6	9.9	9.0	9.1	9.2	14.6	15.3	15.2	15.2	14.6	14.9	14.6	16.1	14.3	14.6	14.8	13.1	13.7	14.0	14.0	13.8	13.9	13.0	15.1	12.9	12.4	13.1		
Total	mill. tce	323.2	319.6	311.4	315.1	310.8	318.1	330.5	325.3	322.7	317.3	315.1	322.6	314.8	319.6	317.0	312.0	323.8	303.2	315.9	298.6	320.2	306.7	309.2	316.6	299.7	306.7	311.4	314.8	308.8	309.3	288.7	300.9	292.2	277.1	276.2		
Total final energy consumption by energy source in %																																						
Hard coal	%	6.0	5.7	5.3	4.6	4.9	4.9	4.6	4.8	4.1	4.2	4.7	4.3	4.3	3.9	3.6	3.3	3.6	3.9	3.6	3.1	3.8	3.9	3.8	3.6	4.0	4.3	4.1	4.0	4.0	3.7	3.3	4.3	3.6	3.4	3.6		
Lignite	%	10.3	5.9	3.9	3.2	2.4	1.9	1.7	1.4	1.1	1.0	0.9	0.8	0.8	0.8	0.9	0.8	0.9	0.9	0.9	0.9	1.0	1.0	1.0	1.0	0.9	1.0	1.0	0.9	0.9	1.1	1.0	0.9	0.8	0.8	0.8		
Petroleum	%	42.9	46.2	47.9	48.8	48.3	47.2	46.9	46.8	46.9	46.1	44.9	45.0	44.0	41.9	40.9	40.8	40.6	37.0	38.5	39.1	36.7	37.1	37.0	37.5	38.1	37.7	37.7	38.0	37.3	38.1	35.7	33.1	36.0	37.0	36.7		
Gases	%	18.9	20.4	21.0	21.8	22.2	23.2	24.8	24.2	24.6	25.0	25.2	25.8	25.9	24.7	24.6	24.5	24.4	24.8	24.7	24.2	25.0	23.9	24.1	24.6	23.4	24.0	24.4	24.3	24.5	24.4	25.5	26.7	24.6	23.9	23.7		
Natural gas, Petroleum gas	%	16.3	18.0	18.9	20.0	20.7	21.7	23.5	22.8	23.2	23.7	23.9	24.6	24.8	23.6	23.4	23.3	23.2	23.7	23.5	23.2	23.9	22.6	22.9	23.5	22.3	22.9	23.3	23.3	23.3	23.2	24.4	25.7	23.5	22.5	22.5		
Renewable Energy Sources	%	0.6	0.5	0.5	0.6	0.7	1.2	1.1	1.8	2.0	2.1	2.2	2.4	2.5	3.6	4.0	4.6	5.6	6.7	6.4	6.5	7.3	7.2	7.7	7.6	7.4	7.3	7.2	7.3	7.6	7.7	8.5	8.6	9.4	9.3	9.0		
Other energy sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.8	0.3	0.2	0.4	0.7	0.8	0.8	1.1	0.9	0.7	0.7	0.7	0.7	0.9	0.9	0.8	0.9	0.9	0.9	0.9			
Electricity	%	17.3	17.2	17.6	17.2	17.6	17.7	17.3	17.7	18.1	18.5	19.3	18.8	19.5	19.8	20.3	20.6	20.0	21.5	20.6	20.5	20.5	21.1	20.9	20.3	21.0	20.6	20.4	20.2	20.4	19.9	20.6	20.4	20.1	20.1	20.6		
District heat	%	4.0	4.0	3.9	3.8	3.8	3.9	3.6	3.2	3.3	3.1	2.9	2.8	2.9	4.6	4.8	4.9	4.7	4.8	4.7	4.9	5.0	4.7	4.7	4.7	4.4	4.5	4.5	4.5	4.5	4.5	4.5	5.0	4.4	4.5	4.7		
Total	%	100.0																																				
Total final energy consumption by energy source, changes compared to the previous year in %																																						
Hard coal	%	n/a	-7.0	-9.1	-11.4	4.2	1.9	-1.7	2.8	-15.2	0.8	9.8	-5.3	-2.8	-7.1	-8.3	-9.7	10.7	2.7	-5.2	-18.6	32.0	-0.4	-3.6	-0.8	3.0	9.8	-1.2	-3.2	-1.5	-5.9	-18.2	35.3	-17.1	-10.1	3.4		
Lignite	%	n/a	-43.1	-36.4	-16.5	-24.9	-19.6	-6.9	-21.1	-20.1	-10.1	-12.1	-6.7	-8.7	6.9	8.2	-4.4	4.5	-4.1	11.5	-8.5	11.8	6.2	-2.1	0.2	-7.9	-2.0	3.9	1.6	-2.7	-8.0	13.5	-4.4	-5.6	-18.5	-4.7		
Petroleum	%	n/a	6.6	1.1	2.9	-2.4	0.1	3.3	-1.8	-0.8	-3.2	-3.3	2.6	-4.5	-3.4	-3.2	-1.8	3.2	-14.6	8.3	-4.0	0.7	-3.1	0.5	3.8	-3.7	1.1	1.6	2.0	-3.9	2.4	-12.5	-3.5	5.5	-2.4	-1.3		
Gases	%																																					

6.5 Final energy consumption by energy source: agriculture, fishing, construction

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024		
Final energy consumption by energy source: agriculture in PJ																																						
Motor gasoline	PJ	n/a	2.5	2.5	2.5	2.5	2.7	2.8	2.7	2.8	2.8	3.1	3.5	3.5	3.4	3.4	3.4																					
Diesel oil	PJ	n/a	62.1	65.2	66.2	67.2	71.7	69.9	70.8	70.8	68.2	69.6	69.3	69.8	66.7	65.9	66.7																					
Fuel oil light	PJ	n/a	14.3	17.3	14.2	13.3	15.9	13.5	14.3	10.9	10.7	9.9	11.6	11.7	11.2	11.4	11.4																					
Liquified petroleum Gas	PJ	n/a	9.1	10.6	8.7	8.2	9.9	8.5	9.1	7.0	6.9	6.5	7.6	7.7	7.4	7.5	7.5																					
Natural gas, Petroleum gas	PJ	n/a	17.0	19.7	16.1	15.2	18.4	15.8	16.8	13.0	12.9	12.1	14.1	14.3	13.7	13.9	13.9																					
Biodiesel	PJ	n/a	4.0	4.3	4.4	4.0	4.4	3.8	3.7	3.7	3.9	3.9	5.9	4.9	4.6	4.9	4.1																					
Bioethanol	PJ	n/a	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2																					
Other biomass	PJ	n/a	18.9	19.0	21.2	23.5	25.5	27.6	29.2	30.5	28.0	28.3	28.4	28.8	27.5	27.9	27.9																					
Electricity	PJ	n/a	21.2	20.3	20.5	16.1	22.5	19.9	19.6	18.3	18.5	17.8	16.4	16.7	15.9	16.1	16.1																					
Total	PJ	n/a	149.2	159.1	154.0	150.2	171.1	162.1	166.4	157.1	152.0	151.3	156.8	157.7	150.5	151.1	151.0																					
Final energy consumption by energy source: fishing in PJ																																						
Motor gasoline	PJ	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																					
Diesel oil	PJ	n/a	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.6																				
Fuel oil light	PJ	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																				
Liquified petroleum Gas	PJ	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																				
Natural gas, Petroleum gas	PJ	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																				
Biodiesel	PJ	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																				
Bioethanol	PJ	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																				
Other biomass	PJ	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0																				
Electricity	PJ	n/a	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1																				
Total	PJ	n/a	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	0.9	0.9	0.8	0.7																					
Final energy consumption by energy source: construction in PJ																																						
Motor gasoline	PJ	n/a	2.4	2.5	2.2	2.5	2.4	2.2	2.4	2.7	3.0	3.1	3.2	3.1	3.0	3.0	3.0																					
Diesel oil	PJ	n/a	25.5	26.9	25.6	28.8	29.4	32.5	33.5	34.8	34.2	35.4	35.4	35.4	34.6	34.3	34.4																					
Fuel oil light	PJ	n/a	16.8	15.5	15.2	13.2	15.1	14.6	14.7	15.3	17.2	17.8	18.3	18.0	17.6	17.4	17.4																					
Liquified petroleum Gas	PJ	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																				
Natural gas, Petroleum gas	PJ	n/a	21.9	21.4	22.0	19.0	21.7	20.9	21.1	21.9	24.7	25.6	26.3	25.9	25.3	25.0	24.9																					
Biodiesel	PJ	n/a	1.7	1.8	1.7	1.7	1.8	1.8	1.8	1.9	2.0	3.0	2.5	2.4	2.5	2.5	2.1																					
Bioethanol	PJ	n/a	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1																					
Other biomass	PJ	n/a	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																				
Electricity	PJ	n/a	14.3	15.9	15.7	12.9	14.7	14.2	14.3	14.9	16.8	17.3	17.8	17.6	17.2	16.9	16.9																					
Total	PJ	n/a	82.6	84.1	82.6	78.2	85.3	86.3	87.8	91.6	97.9	101.3	104.1	102.6	100.3	99.2	98.8																					

1990 - 2023: final data, 2024: provisional data

Source: fossil fuels and electricity according to AG Energiebilanzen based on destatis, UGR; renewable energy sources based on AGEE-Stat

6.6 Final energy consumption by energy source: transport

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Final energy consumption by energy source: transport in PJ																																					
Hard coal	PJ	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Lignite	PJ	0	0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Petroleum	PJ	2,329	2,372	2,468	2,542	2,497	2,554	2,562	2,577	2,628	2,718	2,681	2,623	2,594	2,505	2,532	2,469	2,498	2,376	2,376	2,362	2,365	2,371	2,374	2,433	2,441	2,484	2,548	2,630	2,578	2,587	2,129	2,199	2,340	2,309	2,293	
Gases	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	4	4	5	5	5	6	6	6	6	6	5	5	5	5	5	8	8	7	2	
Natural gas, Petroleum gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	4	4	5	5	5	6	6	6	6	6	5	5	5	5	5	8	8	7	2	
Renewable Energy Sources	PJ	0	0	0	0	0	2	2	4	4	5	12	17	20	29	38	76	140	159	124	110	121	118	124	113	116	107	108	109	113	112	141	124	126	132	122	
Other energy sources	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Electricity	PJ	49	55	54	54	55	58	60	61	58	57	57	58	58	47	46	47	46	44	40	42	43	44	43	41	40	42	40	42	42	42	47	53	58	61		
District heat	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	PJ	2,379	2,428	2,522	2,596	2,553	2,614	2,625	2,643	2,691	2,781	2,751	2,698	2,672	2,584	2,619	2,596	2,688	2,584	2,545	2,519	2,535	2,539	2,546	2,595	2,604	2,638	2,704	2,784	2,738	2,746	2,316	2,379	2,527	2,506	2,478	
Final energy consumption by energy source: transport in mill. tce																																					
Hard coal	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Lignite	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum	mill. tce	79.5	80.9	84.2	86.7	85.2	87.1	87.4	87.9	89.7	92.7	91.5	89.5	88.5	85.5	86.4	84.3	85.2	81.1	81.1	80.6	80.7	80.9	81.0	83.0	83.3	84.8	86.9	89.7	88.0	88.3	72.6	75.0	79.8	78.8	78.2	
Gases	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1
Natural gas, Petroleum gas	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1
Renewable Energy Sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.4	0.6	0.7	1.0	1.3	2.6	4.8	5.4	4.2	3.7	4.1	4.0	4.2	3.8	4.0	3.7	3.7	3.7	3.9	3.8	4.8	4.2	4.3	4.5	4.2	
Other energy sources	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Electricity	mill. tce	1.7	1.9	1.8	1.8	1.9	2.0	2.0	2.1	2.0	1.9	2.0	2.0	2.0	1.6	1.6	1.6	1.6	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.4	1.6	1.8	2.0	2.1	2.1	
District heat	mill. tce	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	mill. tce	81.2	82.8	86.1	88.6	87.1	89.2	89.6	90.2	91.8	94.9	93.9	92.0	91.2	88.2	89.4	88.6	91.7	88.2	86.8	86.0	86.5	86.6	86.9	88.5	88.8	90.0	92.2	95.0	93.4	93.7	79.0	81.2	86.2	85.5	84.6	
Final energy consumption by energy source: transport in %																																					
Hard coal	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Lignite	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum	%	97.9	97.7	97.9	97.9	97.8	97.7	97.6	97.5	97.7	97.7	97.5	97.2	97.1	97.0	96.7	95.1	92.9	92.0	93.4	93.8	93.3	93.4	93.2	93.8	93.7	94.2	94.3	94.5	94.2	94.2	91.9	92.5	92.6	92.2	92.5	
Gases	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.1	
Natural gas, Petroleum gas	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.1	
Renewable Energy Sources	%	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.2	0.4	0.6	0.8	1.1	1.5	2.9	5.2	6.2	4.9	4.4	4.8	4.7	4.9	4.3	4.5	4.1	4.0	3.9	4.1	4.1	6.1	5.2	5.0	5.3	4.9	
Other energy sources	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Electricity	%	2.1	2.3	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.2	1.8	1.8	1.8	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.7	1.6	1.5	1.6	1.4	1.5	1.5	1.8	2.0	2.1	2.3	2.5	
District heat	%	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	%	100.0																																			
Final energy consumption by energy source: transport, changes compared to the previous year in %																																					
Hard coal	%	n/a	17.2	-20.0	-44.8	-21.5	-50.9	-25.2	0.0	-37.2	11.1	-51.7	-100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Lignite	%	n/a	0.0	0.0	0.0	0.0	0.0	-35.2	-31.2	0.5	-21.9	-49.9	-91.2	-100.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum	%	n/a	1.9	4.0	3.0	-1.7	2.3	0.3	0.6	2.0	3.4	-1.3	-2.2	-1.1	-3.4	1.1	-2.5	1.1	-4.9	0.0	-0.6	0.1	0.3	0.1	2.5	0.3	1.8	2.6	3.2	-2.0	0.4	-17.7	3.3	6.4	-1.3	-0.7	
Gases	%	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	12.7	42.2	-8.0	19.4	8.6	3.6	1.6	3.7	1.6	-3.4	2.9	-8.0	-3.9	-1.8	-4.5	-2.3	70.2	-2.3	-11.6	-65.0		
Natural gas, Petroleum gas	%	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5	12.7	42.2	-8.0	19.4	8.6	3.6	1.6	3.7	1.6	-3.4	2.9	-8.0	-3.9	-1.8	-4.5	-2.3	70.2	-2.3	-11.6	-65.0		
Renewable Energy Sources	%	n/a	0.0	0.0	0.0	0.0	0.0	36.0	78.5	11.7	31.6	128.6	36.4	22.2	40.6	32.0	101.5	83.2	13.6	-21.9	-11.6	9.9	-2.0	4.5	-9.0	2.9	-7.5	0.5	1.3	3.7	-0.9	25.4	-11.7	1.5	4.6	-7.6	
Other energy sources	%	n/a	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Electricity	%	n/a	12.1	-2.8	0.7	2.7	5.1	2.2	1.9	-4.6	-1.5	0.5	0.6	0.0	-18.4	-1.3	1.8	-3.5	-3.5	-9.3	4.5	4.2	0.2	-0.7	-0.8	-3.4	-3.2	5.3	-4.6	4.3	0.3	-0.6	13.0	12.2	8.4	5.9	

6.7 Final energy consumption: transport by sectors and selected energy sources

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Final energy consumption: transport by sectors and selected energy sources in PJ																																				
Rail transport	PJ	89	91	88	89	88	89	90	89	85	83	83	81	80	69	67	67	64	62	57	57	59	59	58	57	54	54	56	52	51	52	51	53	53	52	50
Electricity	PJ	49	55	54	54	55	58	60	61	58	57	57	58	58	47	46	47	46	44	40	42	43	44	43	43	41	40	42	40	41	41	39	41	42	41	40
Diesel oil	PJ	38	34	34	34	32	31	30	28	27	25	25	24	22	22	20	19	17	16	16	14	15	15	14	14	12	13	14	11	9	11	11	10	10	10	10
Road transport	PJ	2,067	2,118	2,198	2,259	2,209	2,266	2,267	2,281	2,328	2,404	2,358	2,314	2,294	2,209	2,218	2,165	2,242	2,129	2,089	2,079	2,095	2,116	2,101	2,146	2,170	2,205	2,243	2,292	2,235	2,245	2,051	2,056	2,080	2,042	2,032
Aviation transport	PJ	196	192	206	218	226	235	246	255	262	281	298	291	288	291	317	345	362	375	379	368	362	347	371	375	362	362	389	426	438	435	200	258	385	402	386
Jet fuel / kerosene	PJ	193	190	204	217	225	233	245	254	261	280	297	290	287	290	316	344	361	374	378	367	362	346	371	375	362	362	389	425	437	434	200	258	385	402	386
Coastal and inland shipping	PJ	28	28	30	31	30	24	22	17	16	13	12	11	10	15	17	20	20	17	19	16	18	17	17	17	16	16	15	15	15	14	12	9	10	10	10
Total	PJ	2,379	2,428	2,522	2,596	2,553	2,614	2,625	2,643	2,691	2,781	2,751	2,698	2,672	2,584	2,619	2,596	2,688	2,584	2,545	2,519	2,535	2,539	2,546	2,595	2,604	2,638	2,704	2,784	2,738	2,746	2,316	2,379	2,527	2,506	2,478
Final energy consumption: transport by sectors and selected energy sources in mill. tce																																				
Rail transport	mill. tce	3.0	3.1	3.0	3.0	3.0	3.1	3.1	3.1	2.9	2.8	2.8	2.8	2.7	2.4	2.3	2.3	2.2	2.1	1.9	1.9	2.0	2.0	2.0	1.9	1.8	1.9	1.8	1.7	1.8	1.7	1.8	1.7	1.8	1.8	1.7
Electricity	mill. tce	1.7	1.9	1.8	1.8	1.9	2.0	2.0	2.1	2.0	1.9	2.0	2.0	2.0	1.6	1.6	1.6	1.6	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.3	1.4	1.4	1.4	1.4	1.4
Diesel oil	mill. tce	1.3	1.2	1.2	1.2	1.1	1.1	1.0	0.9	0.9	0.9	0.9	0.8	0.8	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.3	0.4	0.4	0.4	0.4	0.3	0.3
Road transport	mill. tce	70.5	72.3	75.0	77.1	75.4	77.3	77.4	77.8	79.4	82.0	80.5	79.0	78.3	75.4	75.7	73.9	76.5	72.7	71.3	70.9	71.5	72.2	71.7	73.2	74.1	75.2	76.5	78.2	76.2	76.6	70.0	70.2	71.0	69.7	69.3
Aviation transport	mill. tce	6.7	6.6	7.0	7.4	7.7	8.0	8.4	8.7	8.9	9.6	10.2	9.9	9.8	9.9	10.8	11.8	12.3	12.8	12.9	12.6	12.4	11.8	12.7	12.8	12.4	12.4	13.3	14.5	14.9	14.8	6.8	8.8	13.1	13.7	13.2
Jet fuel / kerosene	mill. tce	6.6	6.5	7.0	7.4	7.7	8.0	8.3	8.7	8.9	9.6	10.1	9.9	9.8	9.9	10.8	11.7	12.3	12.8	12.9	12.5	12.3	11.8	12.6	12.8	12.3	12.3	13.3	14.5	14.9	14.8	6.8	8.8	13.1	13.7	13.2
Coastal and inland shipping	mill. tce	0.9	1.0	1.0	1.0	1.0	0.8	0.7	0.6	0.5	0.4	0.4	0.4	0.3	0.5	0.6	0.7	0.7	0.6	0.5	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.3
Total	mill. tce	81.2	82.8	86.1	88.6	87.1	89.2	89.6	90.2	91.8	94.9	93.9	92.0	91.2	88.2	89.4	88.6	91.7	88.2	86.8	86.0	86.5	86.6	86.9	88.5	88.8	90.0	92.2	95.0	93.4	93.7	79.0	81.2	86.2	85.5	84.6
Final energy consumption: transport by sectors and selected energy sources in %																																				
Rail transport	%	3.7	3.7	3.5	3.4	3.4	3.4	3.4	3.4	3.2	3.0	3.0	3.0	3.0	2.7	2.6	2.6	2.4	2.4	2.2	2.3	2.3	2.3	2.2	2.1	2.0	2.1	1.9	1.9	1.9	2.2	2.2	2.1	2.1	2.0	
Electricity	%	2.1	2.3	2.1	2.1	2.2	2.2	2.3	2.3	2.2	2.1	2.1	2.1	2.2	1.8	1.8	1.8	1.7	1.7	1.6	1.7	1.7	1.7	1.7	1.6	1.6	1.5	1.5	1.4	1.5	1.5	1.7	1.7	1.7	1.7	1.6
Diesel oil	%	1.6	1.4	1.3	1.3	1.3	1.2	1.1	1.1	1.0	0.9	0.9	0.9	0.8	0.8	0.8	0.7	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.4	0.4	0.4
Road transport	%	86.9	87.2	87.1	87.0	86.5	86.7	86.4	86.3	86.5	86.5	85.7	85.8	85.9	85.5	84.7	83.4	83.4	82.4	82.1	82.5	82.6	83.3	82.5	82.7	83.4	83.6	83.0	82.3	81.6	81.7	88.6	86.4	82.3	81.5	82.0
Aviation transport	%	8.2	7.9	8.2	8.4	8.9	9.0	9.4	9.7	9.7	10.1	10.8	10.8	10.8	11.3	12.1	13.3	13.5	14.5	14.9	14.6	14.3	13.7	14.6	14.5	13.9	13.7	14.4	15.3	16.0	15.8	8.6	10.8	15.2	16.0	15.6
Jet fuel / kerosene	%	8.1	7.8	8.1	8.3	8.8	8.9	9.3	9.6	9.7	10.1	10.8	10.7	10.8	11.2	12.1	13.2	13.4	14.5	14.9	14.6	14.3	13.6	14.6	14.4	13.9	13.7	14.4	15.3	16.0	15.8	8.6	10.8	15.2	16.0	15.6
Coastal and inland shipping	%	1.2	1.2	1.2	1.2	1.2	0.9	0.8	0.6	0.6	0.5	0.4	0.4	0.4	0.6	0.7	0.8	0.8	0.7	0.8	0.6	0.7	0.7	0.7	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.6	0.5	0.4	0.4	0.4
Total	%	100.0																																		
Final energy consumption: transport by sectors and selected energy sources, changes compared to the previous year in %																																				
Rail transport	%	n/a	2.0	-2.3	0.3	-1.2	2.1	1.1	-1.2	-4.9	-2.8	0.6	-2.2	-2.1	-13.2	-2.5	-0.3	-4.6	-3.0	-8.2	-0.1	3.6	0.2	-2.7	-0.5	-5.4	-0.8	4.6	-8.4	-1.0	1.6	-2.1	4.7	-0.2	-1.8	-4.2
Electricity	%	n/a	12.1	-2.8	0.7	2.7	5.1	2.2	1.9	-4.6	-1.5	0.5	0.6	0.0	-18.5	-1.3	1.9	-3.5	-3.5	-9.3	4.5	4.2	0.2	-0.7	-0.9	-3.5	-3.4	5.1	-5.2	3.7	-1.5	-3.5	5.6	1.3	-1.3	-3.8
Diesel oil	%	n/a	-11.3	-0.9	1.1	-6.7	-2.7	-4.9	-5.9	-4.5	-5.7	1.6	-7.4	-6.3	-2.0	-5.7	-7.3	-9.9	-3.4	-3.1	-10.1	2.1	0.7	-8.3	1.9	-10.8	8.5	3.4	-17.6	-16.9	14.0	0.3	2.7	-5.3	-4.3	-4.4
Road transport	%	n/a	2.5	3.8	2.8	-2.2	2.6	0.0	0.6	2.1	3.3	-1.9	-1.9	-0.9	-3.7	0.4	-2.4	3.6	-5.0	-1.9	-0.5	0.8	1.0	-0.7	2.1	1.2	1.6	1.7	2.2	-2.5	0.5	-8.6	0.2	1.2	-1.8	-0.5
Aviation transport	%	n/a	-1.9	7.3	5.7	3.9	3.6	4.7	3.9	2.8	7.3	6.1	-2.6	-0.9	1.0	8.8	8.7	5.0	3.6	1.1	-2.9	-1.5	-4.3	7.0	1.1	-3.4	0.0	7.5	9.3	2.8	-0.6	-54.0	28.7	49.5	4.4	-4.0
Jet fuel / kerosene	%	n/a	-1.9	7.8	6.0	4.0	3.7	4.8	3.8	2.9	7.3	6.1	-2.5	-0.8	1.1	8.9	8.7	5.1	3.7	1.0	-2.9	-1.5	-4.3	7.1	1.1	-3.4	-0.1	7.6	9.3	2.8	-0.6	-54.0	28.8	49.5	4.4	-4.0
Coastal and inland shipping	%	n/a	0.9	6.7	2.2	-2.3	-21.0	-8.1	-20.9	-8.4	-18.5	-7.2	-3.6	-12.8	45.9	18.8	15.7	0.8	-16.0	15.0	-19.0	17.3	-9.6	0.9	-1.8	-1.4	-2.1	-8.5	2.5	-0.6	-0.8	-5.2	-14.0	-24.8	7.6	2.8
Total	%	n/a	2.1	3.9	2.9	-1.6	2.4	0.4	0.7	1.8	3.3	-1.1	-2.0	-1.0	-3.3	1.4	-0.9	3.5	-3.9	-1.5	-1.0	0.6	0.2	0.3	1.9	0.3	1.3	2.5	3.0	-1.7	0.3	-15.7	2.7	6.2	-0.9	-1.1

1990 - 2023: final data, 2024: provisional data

See also 'Preliminary notes on the evaluation tables of the German Energy Balance'

6.8 Final energy consumption: road transport by energy sources

Energy source	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	
Final energy consumption: road transport by energy sources in PJ																																					
Motor gasoline	PJ	1,330	1,332	1,344	1,351	1,277	1,300	1,300	1,297	1,300	1,301	1,237	1,199	1,166	1,107	1,073	1,002	967	891	853	828	791	787	740	738	742	731	732	735	714	721	649	654	674	690	704	
Diesel oil	PJ	736	785	854	908	932	964	965	980	1,023	1,097	1,108	1,097	1,106	1,070	1,102	1,081	1,125	1,066	1,091	1,113	1,156	1,182	1,212	1,267	1,287	1,343	1,381	1,427	1,385	1,391	1,244	1,255	1,252	1,189	1,176	
Liquified petroleum gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	2	6	11	18	24	23	23	21	23	20	19	18	16	17	15	10	10	9	8	8	
Natural gas, Petroleum gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	3	4	4	5	5	6	6	6	6	6	5	5	5	5	5	8	8	7	2	
Renewable energy sources	PJ	0	0	0	0	0	2	2	4	4	5	12	17	20	28	37	75	139	157	123	109	120	117	123	112	115	106	107	108	113	112	140	123	125	131	121	
Electricity	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	3	6	11	16	21	
Total	PJ	2,067	2,118	2,198	2,259	2,209	2,266	2,267	2,281	2,327	2,403	2,358	2,314	2,293	2,209	2,218	2,165	2,242	2,129	2,089	2,079	2,095	2,116	2,101	2,146	2,170	2,205	2,243	2,292	2,235	2,245	2,051	2,056	2,080	2,042	2,032	
thereof motorized individual transport in PJ																																					
Motor gasoline	PJ	1,320	1,322	1,333	1,340	1,266	1,290	1,290	1,287	1,291	1,291	1,228	1,191	1,158	1,099	1,064	993	957	882	846	820	782	780	732	731	735	725	725	729	707	714	643	647	667	683	695	
Diesel oil	PJ	204	201	214	222	230	238	240	241	245	249	250	277	294	327	367	385	415	410	427	446	481	504	527	567	583	619	642	658	631	599	535	526	508	477	473	
Liquified petroleum gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2	6	10	17	23	22	23	20	22	20	18	17	15	16	14	10	9	8	7	7	
Natural gas, Petroleum gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	2	3	3	4	4	4	5	3	3	3	3	2	2	2	2	1	1	
Renewable energy sources	PJ	0	0	0	0	0	0	1	1	1	1	3	4	5	9	14	31	60	68	58	58	67	68	72	68	70	66	66	66	68	65	76	68	68	71	66	
Electricity	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	2	5	10	15	19	
Total	PJ	1,524	1,523	1,547	1,562	1,496	1,528	1,530	1,530	1,537	1,541	1,481	1,472	1,458	1,435	1,446	1,412	1,439	1,372	1,351	1,351	1,357	1,379	1,356	1,393	1,411	1,430	1,454	1,472	1,427	1,395	1,267	1,257	1,263	1,254	1,261	
thereof public transport in PJ																																					
Motor gasoline	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Diesel oil	PJ	37	124	76	42	22	33	19	22	42	78	77	50	46	8	6	3	41	39	82	52	57	51	42	37	38	40	42	42	41	39	25	25	35	35	36	
Liquified petroleum gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Natural gas, Petroleum gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	0	0	0	0	0
Renewable energy sources	PJ	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	5	5	8	4	4	4	3	2	3	2	3	3	3	3	2	2	3	3	3	
Electricity	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total	PJ	37	124	76	42	23	33	19	22	42	79	78	51	46	10	8	4	47	46	91	57	62	55	45	40	42	44	45	46	45	42	28	28	39	39	40	
thereof freight transport in PJ																																					
Motor gasoline	PJ	11	10	11	11	10	10	10	10	10	10	9	8	8	8	10	10	10	10	7	7	8	7	8	7	7	7	6	6	6	7	6	7	7	8	8	
Diesel oil	PJ	495	460	564	644	680	693	706	717	736	770	781	770	766	734	729	694	670	616	581	614	618	627	643	663	666	684	697	727	713	754	685	704	709	676	667	
Liquified petroleum gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Natural gas, Petroleum gas	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	6	6	5	2
Renewable energy sources	PJ	0	0	0	0	0	1	1	3	3	4	9	12	14	19	24	44	75	84	57	47	48	45	47	41	43	38	38	40	42	44	61	53	54	57	52	
Electricity	PJ	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2
Total	PJ	506	470	574	654	690	705	718	729	749	783	799	790	789	763	764	749	756	711	647	671	676	681	699	713	718	732	744	775	763	807	756	771	778	748	731	

1990 - 2023: final data, 2024: provisional data

Source: Data based on ZSW-Verkehrsmodell

7.1 Energy efficiency indicators

Indicator	Unit	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Activity variables 1)																																				
Gross domestic product (GDP)	Bill. €	2,384	2,433	2,482	2,458	2,522	2,560	2,587	2,635	2,690	2,747	2,826	2,872	2,866	2,851	2,884	2,909	3,022	3,109	3,137	2,963	3,085	3,201	3,216	3,229	3,299	3,354	3,429	3,525	3,565	3,599	3,451	3,586	3,651	3,619	3,601
Population	Mill.	77.0	77.6	78.3	78.6	78.8	79.1	79.3	79.3	79.3	79.4	79.5	79.7	79.8	79.8	79.8	79.7	79.6	79.5	79.3	79.1	79.0	79.1	79.3	79.6	80.0	80.9	81.3	81.5	81.8	81.9	81.9	82.0	83.1	83.5	83.6
Gross production value (GPV)	Bill. €	1,032	1,114	1,104	1,017	1,054	1,064	1,060	1,102	1,157	1,178	1,245	1,249	1,230	1,232	1,280	1,317	1,386	1,462	1,464	1,214	1,370	1,476	1,457	1,458	1,484	1,497	1,510	1,548	1,560	1,510	1,373	1,435	1,415	1,405	1,343
Gross value added (GVA)	Bill. €	1,532	1,591	1,651	1,665	1,703	1,743	1,774	1,805	1,852	1,894	1,938	1,983	1,998	1,980	1,997	2,012	2,078	2,140	2,175	2,107	2,133	2,202	2,214	2,236	2,270	2,304	2,345	2,408	2,439	2,468	2,387	2,466	2,537	2,534	2,545
Living space	Mill. m2	2,775	2,805	2,840	2,880	2,953	3,005	3,054	3,106	3,154	3,202	3,245	3,280	3,310	3,339	3,369	3,395	3,421	3,444	3,462	3,479	3,681	3,699	3,721	3,744	3,769	3,795	3,823	3,851	3,879	3,908	3,939	3,968	3,997	4,026	4,049
Transport performance 2)	Bill. pkm	4,291	4,718	4,723	4,663	5,049	5,158	5,140	5,402	5,581	5,876	6,007	6,062	6,073	6,326	6,640	6,720	7,211	7,450	7,498	6,800	7,233	7,256	5,635	5,692	5,778	5,864	6,071	6,043	5,996	5,994	5,545	5,760	5,821	5,573	5,545
Energy intensity 3)																																				
PEC / GDP	GJ/1000 €	6.3	6.0	5.8	5.8	5.6	5.6	5.7	5.5	5.4	5.2	5.1	5.1	5.0	5.1	5.1	5.0	4.9	4.6	4.6	4.6	4.6	4.2	4.2	4.3	4.0	4.0	3.9	3.8	3.7	3.6	3.4	3.5	3.2	2.9	2.9
PEC / residents	GJ/1000 €	193.6	188.3	182.9	182.0	180.0	180.4	186.0	184.2	183.1	180.3	181.1	184.2	180.8	182.9	182.8	182.1	186.7	178.7	181.5	171.0	179.0	171.0	171.9	175.0	165.7	165.5	166.3	166.0	161.5	156.7	145.4	152.2	140.9	127.7	126.1
FEC / GDP	GJ/1000 €	4.0	3.8	3.7	3.8	3.6	3.6	3.7	3.6	3.5	3.4	3.3	3.3	3.2	3.3	3.2	3.1	3.1	2.9	3.0	3.0	3.0	2.8	2.8	2.9	2.7	2.7	2.6	2.5	2.5	2.5	2.5	2.5	2.3	2.2	2.2
FEC / residents	GJ/1000 €	123.0	120.7	116.6	117.4	115.6	117.9	122.2	120.2	119.3	117.1	116.1	118.6	115.6	117.4	116.5	114.7	119.3	111.8	116.8	110.7	118.8	113.6	114.2	116.7	109.8	111.1	112.3	113.1	110.7	110.7	103.3	107.6	103.0	97.3	96.9
FEC Industry / GPV	GJ/1000 €	2.9	2.4	2.3	2.4	2.3	2.3	2.3	2.2	2.1	2.0	1.9	1.9	1.9	2.0	2.0	1.9	1.8	1.8	1.8	1.9	1.9	1.8	1.8	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.6	1.6
FEC TCS / GVA	GJ/1000 €	1.1	1.1	1.0	1.0	0.9	0.9	1.0	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.8	0.6	0.7	0.7	0.7	0.7	0.6	0.7	0.6	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.5	0.5	0.5
FEC Households / Living space	MJ/m2	849.5	885.2	845.5	896.1	859.2	883.4	946.3	918.8	882.0	816.0	796.3	860.2	812.2	823.7	787.6	767.3	776.6	667.3	758.6	720.7	730.8	635.6	673.5	700.9	596.4	618.1	629.6	623.1	618.7	641.2	627.5	648.2	611.9	565.4	555.9
FEC Households / residents	GJ/1000 €	30.6	32.0	30.7	32.8	32.2	33.6	36.5	36.0	35.1	32.9	32.5	35.4	33.7	34.5	33.3	32.7	33.4	28.9	33.1	31.7	34.0	29.7	31.6	33.0	28.1	29.0	29.6	29.4	29.3	30.6	30.2	31.4	29.4	27.3	26.9
FEC Transport / GDP	GJ/1000 €	1.0	1.0	1.0	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7	0.7
FEC Transport / Transport perf.	MJ/100Pkm	55.4	51.5	53.4	55.7	50.6	50.7	51.1	48.9	48.2	47.3	45.8	44.5	44.0	40.8	39.4	38.6	37.3	34.7	33.9	37.0	35.0	35.0	45.2	45.6	45.1	45.0	44.5	46.1	45.7	45.8	41.8	41.3	43.4	45.0	44.7
Energy intensity, changes compared to the previous year in %																																				
PEC / GDP	%	n/a	-4.0	-3.9	0.9	-3.4	-0.9	2.3	-2.7	-2.7	-3.4	-2.3	0.3	-1.5	1.7	-1.3	-1.4	-1.4	-7.1	0.4	-0.5	0.5	-7.8	0.3	1.7	-6.8	-0.6	-1.3	-2.6	-3.6	-3.7	-3.2	0.9	-7.8	-8.2	-0.6
PEC / residents	%	n/a	-2.7	-2.8	-0.5	-1.1	0.2	3.1	-1.0	-0.6	-1.5	0.4	1.7	-1.8	1.2	-0.1	-0.4	2.5	-4.3	1.6	-5.8	4.7	-4.5	0.6	1.8	-5.3	-0.2	0.5	-0.2	-2.7	-3.0	-7.2	4.7	-7.4	-9.4	-1.2
FEC / GDP	%	n/a	-3.1	-4.5	2.2	-3.8	0.8	2.8	-3.4	-2.8	-3.7	-3.5	0.7	-2.2	2.1	-1.9	-2.5	-0.1	-9.0	3.3	0.1	3.0	-7.7	0.3	2.0	-7.4	0.7	-0.7	-1.7	-3.0	-0.8	-2.6	0.3	-4.6	-4.3	0.2
FEC / residents	%	n/a	-1.9	-3.4	0.7	-1.6	2.0	3.7	-1.6	-0.8	-1.8	-0.8	2.2	-2.5	1.5	-0.8	-1.5	3.9	-6.2	4.4	-5.3	7.3	-4.3	0.6	2.1	-5.9	1.1	1.1	0.7	-2.2	0.0	-6.6	4.1	-4.2	-5.5	-0.5
FEC Industry / GPV	%	n/a	-16.2	-4.1	3.2	-2.3	-0.5	-1.7	-3.2	-6.4	-2.4	-3.9	-2.6	-0.4	8.4	-3.0	-5.6	-2.2	-2.1	-2.0	6.8	0.9	-4.7	-0.7	-1.0	-2.8	-0.4	1.6	-1.7	-3.3	-0.1	5.3	2.6	-6.9	-7.0	4.9
FEC TCS / GVA	%	n/a	-3.6	-10.0	-2.0	-6.4	-0.9	8.7	-10.1	-3.2	-6.2	-5.2	3.9	-2.4	-1.2	-3.1	-1.0	5.4	-16.3	7.6	-1.6	7.0	-11.2	-3.2	4.5	-8.4	3.2	-5.4	-2.3	-5.6	-2.4	0.9	-1.7	-7.9	-5.5	1.3
FEC Households / Living space	%	n/a	4.2	-4.5	6.0	-4.1	2.8	7.1	-2.9	-4.0	-7.5	-2.4	8.0	-5.6	1.4	-4.4	-2.6	1.2	-14.1	13.7	-5.0	1.4	-13.0	6.0	4.1	-14.9	3.6	1.9	-1.0	-0.7	3.6	-2.1	3.3	-5.6	-7.6	-1.7
FEC Households / residents	%	n/a	4.5	-4.1	7.0	-1.9	4.3	8.6	-1.3	-2.5	-6.2	-1.2	9.0	-4.8	2.3	-3.5	-1.8	2.2	-13.4	14.6	-4.3	7.4	-12.7	6.3	4.4	-14.8	3.1	2.2	-0.6	-0.3	4.2	-1.4	4.0	-6.2	-7.3	-1.3
FEC Transport / GDP	%	n/a	0.0	1.8	3.9	-4.1	0.9	-0.6	-1.2	-0.3	1.2	-3.8	-3.5	-0.7	-2.8	0.2	-1.7	-0.3	-6.6	-2.4	4.8	-3.4	-3.5	-0.2	1.5	-1.8	-0.4	0.3	0.2	-2.8	-0.7	-12.0	-1.1	4.3	0.0	-0.6
FEC Transport / Transport perf.	%	n/a	-7.2	3.8	4.3	-9.2	0.2	0.8	-4.2	-1.5	-1.9	-3.2	-2.8	-1.2	-7.2	-3.4	-2.1	-3.5	-7.0	-2.1	9.2	-5.4	-0.1	29.2	0.9	-1.2	-0.2	-1.0	3.5	-0.9	0.3	-8.8	-1.1	5.1	3.6	-0.6

1990 - 2023: final data, 2024: provisional data

PEC = Primary Energy Consumption, FEC = Final Energy Consumption

More detailed information on the development of energy efficiency indicators in Germany can be found in the publication:

"Ausgewählte Effizienzindikatoren zur Energiebilanz in Deutschland" (www.ag-energiebilanzen.de).

1) Sources: Destatis and Verkehr in Zahlen

2) 1 tonne-km is equivalent to 10 passenger-km.

3) Source: EEFA according to AGEBA and DESTATIS

8.1 Classification of energy sources compared to the structure of the German Energy Balance

Evaluation tables	Energy Balance since 2000	Energy Balance 1995 to 1999	Energy Balance 1990 to 1994
Hard coal	Coal Briquettes Coke Other hard coal products	Coal Briquettes Coke Other hard coal products	Coal Coke Briquettes Crude tar Pitch Other hard coal products Crude benzene
Lignite	Coal Briquettes Other lignite products Hard lignite	Coal Briquettes Other lignite products Hard lignite	Coal Briquettes Coke Slack Hard lignite
Petroleum	Crude oil Motor gasoline Naphtha Jet fuel / kerosene Diesel oil Fuel oil light Fuel oil heavy Petroleum coke Liquified petroleum Gas Refinery gas Other petroleum products	Crude oil Motor gasoline Naphtha Jet fuel / kerosene Diesel oil Fuel oil light Fuel oil heavy Petroleum coke Liquified petroleum Gas Refinery gas Other petroleum products	Crude oil Motor gasoline Naphtha Aviation gasoline Jet fuel Diesel oil Fuel oil light Fuel oil heavy Petroleum coke Other petroleum products Liquified petroleum Gas Refinery gas
Gases	Coke oven and town gas Blast furnace and converter gas Natural gas, Petroleum gas Mine gas	Coke oven and town gas Blast furnace and converter gas Natural gas, Petroleum gas Mine gas	Coke oven gas Blast furnace gas Natural gas Petroleum gas Mine gas
Renewable energy sources	Hydro, wind and photovoltaics Biomass und renew. wastes Other renew. energy sources	Hydropower Wind energy and photovoltaics Ren. wastes and other biomass Other renew. energy sources	Sewage gas Hydropower Wood Peat Sewage sludge, ren. wastes
Other energy sources	non-renew. wastes, heat		Other energy sources
Electricity	Electricity	Electricity	Electricity
Nuclear energy	Nuclear energy	Nuclear energy	Nuclear energy
District heat	District heat	District heat	District heat