E-CONTROL
Energy for our future.

KEY STATISTICS 2021

ENERGY IN NUMBERS.
LOUD AND CLEAR.

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Preface

E-Control is mandated by law to draw up the Austrian electricity and natural gas statistics and to publish them at www.e-control.at. Among these publications are our annual statistical reports, which have become key tools for all those who work in the areas of electricity and natural gas.

The statistics brochure at hand presents general information such as economic and energy data as well as quantity statistics in a clear and concise way. In addition, it also provides extensive information about market statistics, such as the effects of liberalisation on the Austrian electricity and gas markets, figures relating to the retail and wholesale industry, and much more.

This brochure is meant as a quick introduction to the most important statistical information for all those who are interested in finding out about developments and interrelations on the Austrian energy market.

Wolfgang Urbantschitsch
Executive Director
E-Control

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Executive Director
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Austrian energy statistics

Energy supply is crucial for our daily lives and for our economy, and energy statistics carry particular importance as well; this is also reflected in the way powers and duties in this field are distributed. While Statistics Austria is involved, most statistical duties lie directly with the Minister for Climate Action, Environment, Energy, Mobility, Innovation and Technology. By virtue of section 92 Elektrizitätswirtschafts- und -organisationsgesetz (Electricity Act) 2010 and section 147 Gaswirtschaftsgesetz (Gas Act) 2011, the Minister entrusts the duties related to electricity and gas supply as well as statistics to the regulatory authority, E-Control.

Though this construction deviates from the usual Austrian distribution of competences, the operational statistics produced by E-Control are firmly integrated into the Austrian statistical system and represent the main primary statistical source for the electricity and gas part of the Austrian energy balance.

A major difference between statistics drawn up by Statistics Austria and those produced by E-Control consists in that the former must comply with the rules for energy balances and in particular for international comparability, while the latter depict commodity flows and the Austrian market.

This means different approaches to reflecting energy transformation and an exclusive focus of the energy balance on the energetic use of primary energy sources.

For instance, any use of electrical energy or gas is counted as consumption in E-Control's operational statistics, i.e. we consider that it forms part of the market. The energy balance e.g. counts gas used in power plants as part of transformation when looking at primary energy use but as part of the electricity/heat balance (depending on what it is transformed into) when looking at final energy. When gas is used e.g. by the chemical industry, it appears as non-energetic use (not as energetic use in chemical processes).

The documentation accompanying the energy balance for 2015 for the first time contained a detailed referencing that enabled going back and forth between the two approaches.

The economic situation in 2020

The Austrian economy contracted by 6.3% compared to the previous year. Statistics Austria detected a 3.7% rise in consumer prices, while, in terms of CPI, gas prices decreased by 1.5% and electricity prices increased by 5.8%.

Consumption trends in 2020

Electricity and gas consumption moved in step in 2020. Gas use fell by 4% to 90.5 TWh or 8 billion (bn) normal cubic metres (n cu m), electricity use in Austria decreased by 3.2% or 2.2 TWh, and stood at 65.1 TWh. The movements on both markets were the result of the Covid-19 measures instated from March 2020 onwards.

Electricity consumption from the public grid by households rose by 5% compared with 2019, and that by small businesses fell (by 8.5%), just like the consumption by medium-sized industry (by 7.2%) and large industry (by 2.4%).

Households used 17.2 TWh gas overall in 2020, non-households 73.5 TWh.

Energy inputs in 2020

Domestic natural gas production declined further, by 17,7% or 1.8 TWh, and made for a total of 8.3 TWh in 2020. Withdrawals from storage stood at 66.3 TWh (up by 82%) and there were injections of 49.3 TWh (a decrease of 28.7%). Net imports dropped by 43% to 69.4 TWh.

Domestic electricity production edged down by 2% to 72.9 TWh, resulting from a 2.7% rise in electricity generated from hydropower and a 12.6% drop in output from thermal power plants. However, electricity generated from biofuels climbed by 3.4%.

Net imports fell by 0.9 TWh and stood at 2.2 TWh. The physical imports declined by 1.5 TWh or 5.9% and exports increased by 0.6 TWh or 2.6%.

Storage situation at year-end 2020

Austrian gas storage held 74.3 TWh at year-end 2020, making for a 77.5% fill level. This corresponds to 82.1% of domestic gas consumption in 2020.

Overall, gas storage facilities with a capacity of 95.8 TWh or 8.5bn n cu m are located on Austrian territory. The hourly withdrawal capacity is 45 GWh or 4bn n cu m.

Fill levels of Austrian electricity storage at year-end 2020 stood at 2.3 TWh (69%). Electricity storage in Austria has an overall capacity of 3.3 TWh.

Market structures and consumer behaviour in 2020

About 94% of the over 1.2m customers on the Austrian gas market are households, but they only account for 19% of consumption. Non-households (including gas-fired power plants) make for more than 81% of the gas consumed.

A total of 78,200 final gas customers (metering points) switched suppliers in 2020, which results in a 6% switching rate. Most switchers (72,000) were households. The switching rate of 6.5% among non-household customers is a little higher than that of households (5.9%). Overall, 2020 was the fourth most active switching year in Austria, with the highest rates noted in Upper Austria (8.9%), Lower Austria (7.0%), and Carinthia (6.7%).

On the electricity side, Austria has 6.3m electricity metering points for 4.7m customers. 81% of these metering points, and 87% of customers, are households, which means the non-household sector accounts for no more than 19% of metering points and 13% of customers. Looking at consumption, the picture is reversed: non-households account for about 73%, households are just shy of 27%.

Overall, more than 238,000 electricity metering points were switched to different suppliers in 2020, i.e. the overall switching rate was 3.8%. Large industrial customers were least active, with a switching rate of 0.1%, which is considerably lower than the Austrian average. Other small customers (4.4%) and households (3.7%) were more involved.

In terms of regional differences, the highest switching rates were observed in Upper Austria (5.6%), and Vienna and Lower Austria (both 4.3%).

Overview

Economic indicators

Consumer price index, Jan 2010 = 100

	Total		Electricity		Natural gas	
	Annual average	Change in % (*)	Annual average	Change in % (*)	Annual average	Change in % (*)
1995	78.2		73.9		58.6	
2000	83.8	1.4	78.3	1.2	66.1	2.4
2005	92.7	2.0	83.0	1.2	82.8	4.6
2010	101.5	1.8	100.3	3.9	99.9	3.8
2015	112.3	2.0	106.5	1.2	112.9	2.5
2018	118.0	1.7	102.7	–1.2	103.3	–2.9
2019	110.3	–6.5	106.6	3.8	103.9	0.6
2020	**114.4**	**3.7**	**112.8**	**5.8**	**102.4**	**–1.5**

(*) average / from 2019 year-on-year rates of change
Source: Statistics Austria

Gross domestic product

	m€ (rate of 2010)	Change in % (*)
1995	219 276	
2000	254 069	3.0
2005	277 307	1.8
2010	295 897	1.3
2015	311 856	1.1
2018	334 095	2.3
2019	338 835	1.4
2020	**317 627**	**–6.3**

(*) average / from 2019 year-on-year rates of change
Source: Statistics Austria, calculations by E-Control

The economic context for the electricity and gas statistics

Population, annual average

	Population numbers	Change in % (*)
1995	7 948 278	
2000	8 011 566	0.2
2005	8 225 278	0.5
2010	8 361 069	0.3
2015	8 629 519	0.6
2018	8 837 707	0.8
2019	8 877 637	0.5
2020	**8 916 845**	**0.4**

(*) average / from 2019 year-on-year rates of change
Source: Statistics Austria

Households

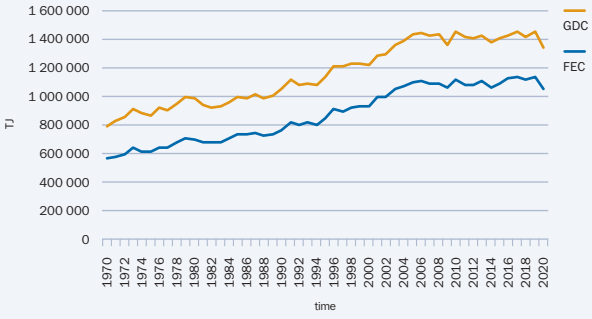
	Single-person households	Multi-person households	Total	Average household size (persons)
1995	892 546	2 200 689	3 093 235	2.54
2000	976 630	2 260 453	3 237 083	2.45
2005	1 198 477	2 276 865	3 475 342	2.34
2010	1 300 166	2 323 587	3 623 753	2.28
2015	1 418 449	2 398 317	3 816 766	2.22
2018	1 456 593	2 459 500	3 916 093	2.22
2019	1 480 122	2 469 741	3 949 863	2.21
2020	**1 505 720**	**2 482 720**	**3 988 440**	**2.20**

Source: Statistics Austria

Relevant Austrian population indicators

Energy industry indicators

Gross domestic consumption (GDC) and final energy consumption (FEC)



Source: Statistics Austria

Gross domestic consumption and final energy consumption

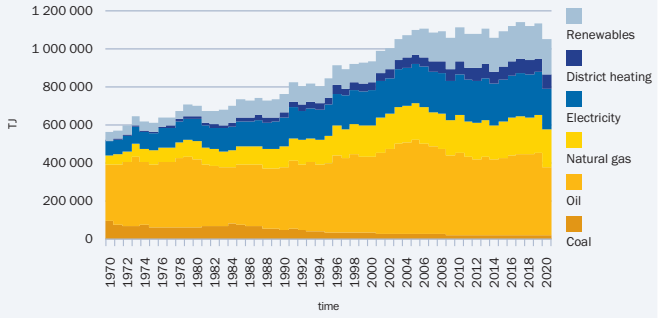
in TJ	Gross domestic consumption	Final energy consumption
1995	1 140 024	845 281
2000	1 224 964	935 834
2005	1 438 116	1 105 486
2010	1 458 261	1 116 143
2015	1 412 385	1 096 979
2018	1 424 202	1 125 429
2019	1 453 875	1 138 758
2020(*)	**1 347 775**	**1 055 041**

(*) provisional figures
Source: Statistics Austria

Main economic and energy consumption indicators

ENERGY BALANCE

Energy mix in final energy consumption



Source: Statistics Austria

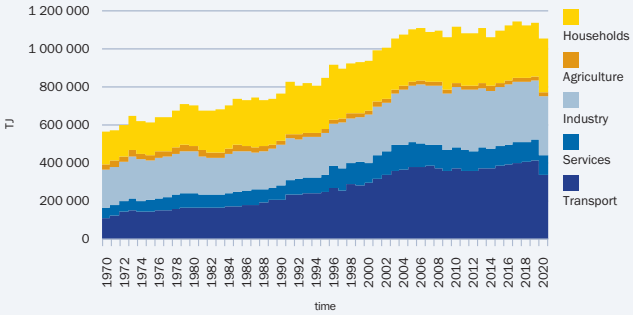
Energy mix in final energy consumption

in TJ	Coal	Oil	Natural gas	Electricity	District heating	Renewables	Total
1995	36 723	364 903	144 211	166 122	35 015	98 307	**845 281**
2000	32 838	401 577	167 279	182 901	41 689	109 550	**935 834**
2005	24 939	496 351	195 354	206 998	51 008	130 836	**1 105 486**
2010	19 800	434 045	198 478	215 763	66 100	181 956	**1 116 143**
2015	18 401	409 786	190 971	220 155	69 516	188 151	**1 096 979**
2018	16 414	430 864	194 919	228 402	71 515	183 315	**1 125 429**
2019	16 577	439 132	197 765	228 644	72 237	184 403	**1 138 758**
2020(*)	**17 556**	**363 656**	**193 979**	**220 316**	**72 542**	**186 992**	**1 055 041**

(*) provisional figures
Source: Statistics Austria

The input side of the Austrian energy balance

Final energy consumption by sectors



Source: Statistics Austria

Final energy consumption by sectors

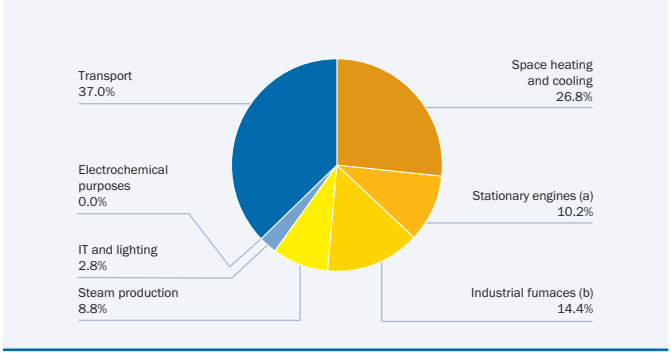
in TJ	Households	Agriculture	Industry	Services	Transport	Total
1995	264 155	22 674	220 038	93 907	244 506	**845 281**
2000	261 352	22 389	249 718	109 829	292 547	**935 834**
2005	275 510	22 240	301 423	126 180	380 134	**1 105 486**
2010	296 012	22 531	317 224	109 938	370 438	**1 116 143**
2015	278 096	22 621	308 797	103 830	383 635	**1 096 979**
2018	274 236	22 439	316 426	108 047	404 280	**1 125 429**
2019	280 644	22 095	311 577	111 767	412 675	**1 138 758**
2020 (*)	**281 080**	**21 924**	**308 362**	**106 776**	**336 899**	**1 055 041**

(*) provisional figures
Source: Statistics Austria

The output side of the Austrian energy balance

USEFUL ENERGY

Useful energy consumption in 2019



Source: Statistics Austria

Useful energy consumption in 2019

	TJ	Share in %
Space heating and cooling	304 708	26.8
Stationary engines (a)	116 005	10.2
Industrial furnaces (b)	163 726	14.4
Steam production	99 805	8.8
IT and lighting	32 095	2.8
Electrochemical purposes	530	0.0
Transport	421 889	37.0
Total	**1 138 758**	**100.0**

(a) Cooling and freezing, and electrical appliances in the household sector
(b) Warm water and cooking in the household sector
Source: Statistics Austria

Uses of energy in Austria as reflected in the energy balance (this and next page)

Natural gas – useful energy consumption in 2019

	TJ	Share in %	Share in total in %
Space heating and cooling	80 414	40.7	7.1
Stationary engines (a)	2 491	1.3	0.2
Industrial furnaces (b)	53 485	27.0	4.7
Steam production	50 860	25.7	4.5
IT and lighting	4	0.0	0.0
Electrochemical purposes	0	0.0	0.0
Transport	10 510	5.3	0.9
Total	**197 765**	**100.0**	**17.4**

(a) Cooling and freezing, and electrical appliances in the household sector
(b) Warm water and cooking in the household sector
Source: Statistics Austria

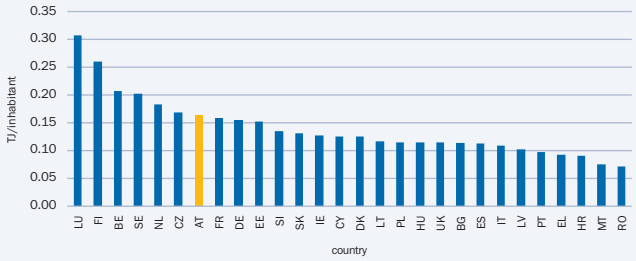
Electricity – useful energy consumption in 2019

	TJ	Share in %	Share in total in %
Space heating and cooling	26 378	11.5	2.3
Stationary engines (a)	102 556	44.9	9.0
Industrial furnaces (b)	51 913	22.7	4.6
Steam production	3 372	1.5	0.3
IT and lighting	32 091	14.0	2.8
Electrochemical purposes	530	0.2	0.0
Transport	11 804	5.2	1.0
Total	**228 644**	**100.0**	**20.1**

(a) Cooling and freezing, and electrical appliances in the household sector
(b) Warm water and cooking in the household sector
Source: Statistics Austria

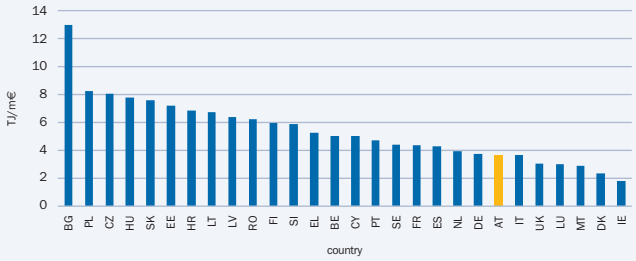
INTERNATIONAL ENERGY INDICATORS

Per capita energy consumption in EU countries in 2019



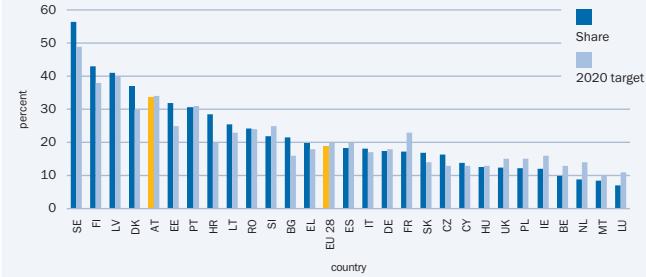
Source: Eurostat

Gross domestic consumption of energy divided by GDP in 2019



Source: Eurostat

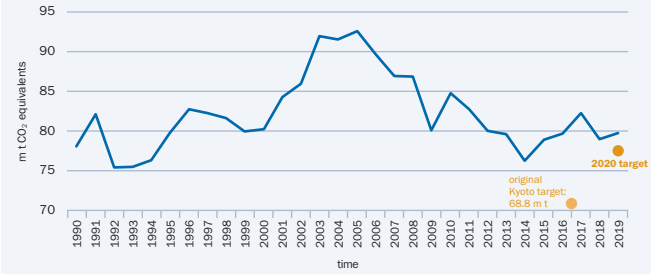
Renewables shares in the EU in 2019 and the 2020 target



Source: Eurostat

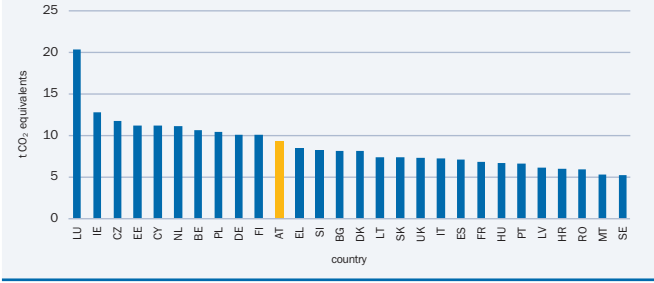
GREENHOUSE GAS EMISSIONS

Emissions in Austria and the 2020 target, 1990–2019



Source: Environment Agency Austria

Per capita emissions in EU countries in 2019



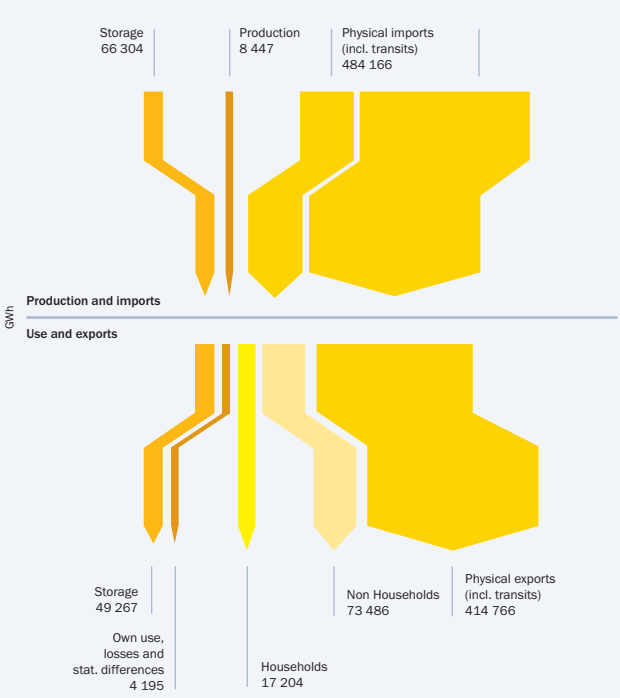
Source: Eurostat

Austrian emissions compared to emissions in other countries

Operational statistics

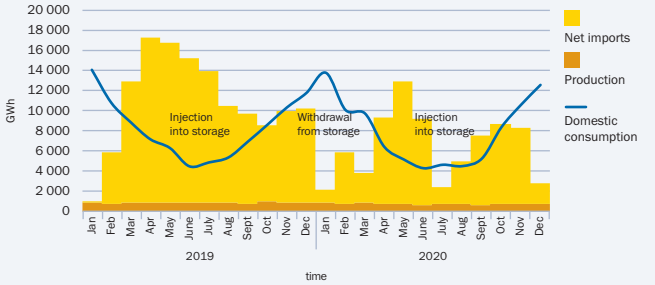
Natural gas in Austria

Simplified energy flow chart for 2020



Flow chart for natural gas in Austria

Natural gas balance

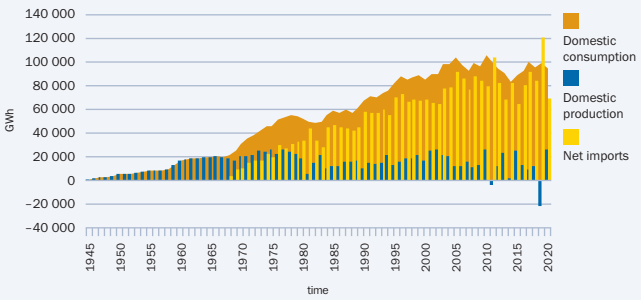


Natural gas balance for 2020

	m Nm³	GWh	Year-on-year change in %
Supply to consumers (a)	**7 985**	**90 467**	**–4.0**
Own use and losses (b) and statistical differences (c)	390	4 418	
Domestic consumption	**8 375**	**94 885**	**–4.2**
Injection into storage (d)	4 348	49 267	–28.7
Exports (d)	36 608	414 766	–3.6
Consumption and exports = production and imports	**49 331**	**558 918**	**–6.6**
Imports (d)	42 733	484 166	–12.2
Production (d)	733	8 310	–17.7
Injection of biogas (d)	12	138	–9.6
Withdrawal from storage (d)	5 852	66 304	81.9

(a) Supply to consumers (here: households, industry, chemical industry, refineries, thermal power plants etc.)
(b) For production, storage operation and transports (including transits)
(c) Statistical difference between calculated and metered supply to consumers
(d) Physical flow data (imports and exports include transits)

Natural gas consumption and supply

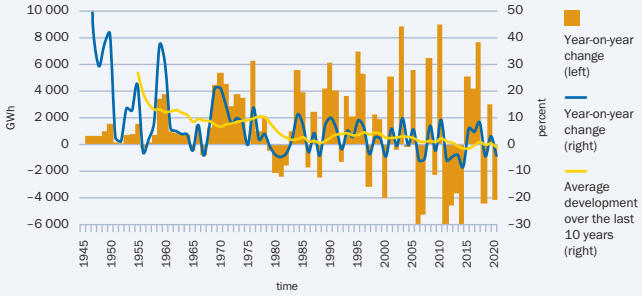


Natural gas balance

in GWh	Supply to consumers (d)	Statistical difference (c)	Own use and losses (b)	Domestic consumption	Net imports	Domestic production (a)
1995	79 631	1	3 265	82 897	70 275	12 621
2000	80 514		4 612	85 126	68 635	16 491
2005	100 420	–401	4 065	104 083	92 019	12 065
2010	102 093	803	2 873	105 769	79 817	25 952
2015	84 585	–343	4 398	88 641	64 091	24 550
2018	90 720	278	5 046	96 044	84 632	11 413
2019	94 238	–16	4 825	99 047	121 408	–22 361
2020	**90 467**	**134**	**4 284**	**94 885**	**69 400**	**25 485**

(a) Production and net storage movements
(b) For production, storage and transports (including transits)
(c) Statistical difference between calculated and metered supply to consumers
(d) Supply to consumers (here: households, industry, chemical industry, refineries, thermal power plants etc.)
Sources: Federal Ministry of Economics and Labour (for data up to 2002), E-Control (for data from 2002 onwards)

Natural gas consumption trends



Physical imports and exports of natural gas in 2020

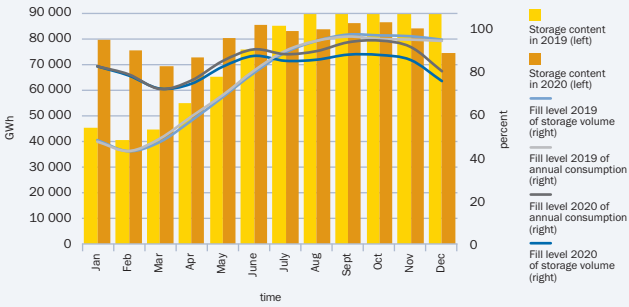
	Imports (*)		Exports (*)	
	in m Nm³	in GWh	in m Nm³	in GWh
Germany	7 774	88 084	2 562	29 025
Switzerland			57	644
Italy			26 381	298 897
Slovenia			1 481	16 782
Hungary			4 299	48 713
Slovakia	34 959	396 082	1 827	20 705
Czech Republic				
Total	**42 733**	**484 166**	**36 608**	**414 766**

(*) Physical flows metered at Austrian borders (including transits)

Main natural gas indicators for Austria (pages 19 – 21)

Natural gas infrastructure in Austria

Natural gas storage at month end (*) in 2020



(*) Includes all storage facilities on the Austrian territory.

Natural gas storage facilities (*)

	Storage volume in GWh	Max. injection rate in MWh per hour	Max. withdrawal rate in MWh per hour
2005	32 202	13 254	14 887
2010	51 906	21 966	25 905
2015	92 685	36 272	44 817
2018	91 774	35 830	44 596
2019	93 684	35 458	45 058
2020	**95 792**	**36 093**	**45 142**

(*) Includes all storage facilities on the Austrian territory.

Domestic gas production		
	Max. production rate in MWh per hour	Max. production rate in 1,000 Nm^3 per hour
2010	2 319	207
2015	1 982	176
2018	1 743	154
2019	1 391	123
2020	**1 134**	**100**

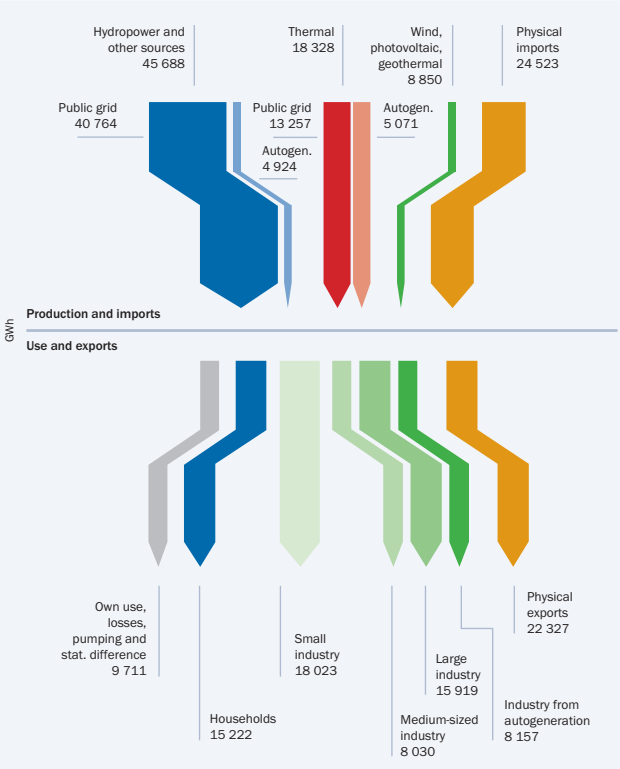
Network length at year end			
in km	Grid level 1, including transmission lines	Distribution lines at grid level 2	Local grids and distribution lines at grid level 3
2000 (*)	2 377	3 266	
2005	2 757	3 425	30 195
2010	3 143	3 685	33 027
2015	3 089	4 096	35 115
2018	3 091	4 100	38 998
2019	3 404	3 801	39 228
2020	**3 405**	**3 793**	**39 363**

(*) Partly estimated based on year of start of operation

Key figures on natural gas infrastructure in Austria (pages 22 and 23)

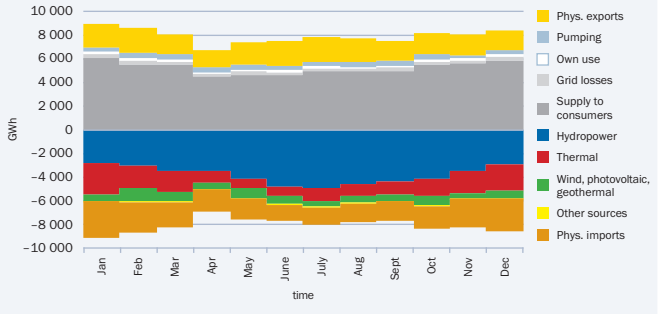
Electricity in Austria (total electricity supply)

Simplified energy flow chart for 2020



Electricity flow chart for Austria

Electricity balance 2020

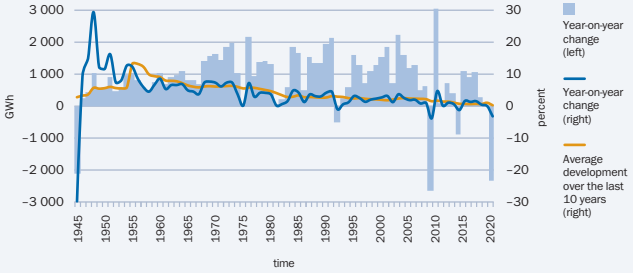


Electricity balance 2020

		2019 in GWh	2020 in GWh	Year-on-year change in GWh	in %
Supply to consumers (1)		67 222	65 072	−2 150	−3.2
Grid losses		3 306	3 192	−114	−3.4
Own use		2 093	2 018	−74	−3.6
Domestic consumption		**72 621**	**70 282**	**−2 339**	**−3.2**
Pumping		4 826	4 780	−46	−0.9
Physical exports		22 918	22 327	−592	−2.6
Use and exports = generation and imports		**100 365**	**97 389**	**−2 976**	**−3.0**
Gross generation	Hydro	44 206	45 380	1 175	2.7
	Thermal	20 960	18 328	−2 632	−12.6
	Renewables (2)	9 137	8 850	−287	−3.1
	Other sources	15	308		
Physical imports		26 047	24 523	−1 524	−5.9

(1) Includes final energy consumption and the electricity consumption of the non-electricity energy sector
(2) Photovoltaics, wind and geothermal

Electricity consumption trends

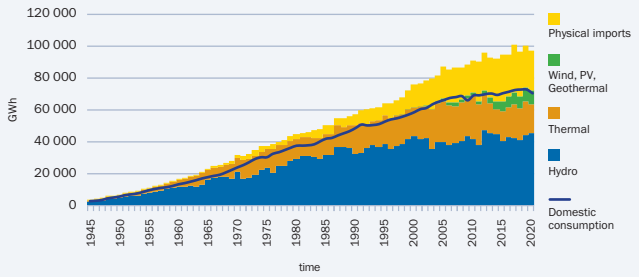


Electricity balance

in GWh	Supply to consumers	Own use	Grid losses	Domestic consumption	Electricity for pumping	Physical exports	Use and exports = generation and imports
1995	47 722	1 556	3 328	**52 606**	1 511	9 757	**63 874**
2000	53 752	1 566	3 195	**58 513**	1 990	15 216	**75 720**
2005	60 469	2 051	3 567	**66 087**	3 276	17 732	**87 095**
2010	63 318	2 089	3 534	**68 941**	4 576	17 472	**90 989**
2015	64 933	1 980	3 443	**70 356**	4 907	19 328	**94 590**
2018	67 356	2 117	3 147	**72 620**	5 025	19 129	**96 774**
2019	67 222	2 093	3 306	**72 621**	4 826	22 918	**100 365**
2020	**65 072**	**2 018**	**3 192**	**70 282**	**4 780**	**22 327**	**97 389**

Austrian electricity indicators (pages 25 – 28)

Domestic consumption and supply



Electricity balance

	Gross generation					Physical imports	Generation and imports = use and exports
in GWh	Hydro-power	Thermal	Wind, PV, Geothermal	Other sources	Total		
1995	38 477	18 110	0		**56 587**	7 287	**63 874**
2000	43 461	18 270	69		**61 800**	13 920	**75 720**
2005	39 574	26 126	1 351	–312	**66 739**	20 355	**87 095**
2010	41 575	27 384	2 105	16	**71 080**	19 909	**90 989**
2015	40 465	18 833	5 860	43	**65 201**	29 389	**94 590**
2018	41 184	19 899	7 569	46	**68 698**	28 076	**96 774**
2019	44 206	20 960	9 137	15	**74 318**	26 047	**100 365**
2020	**45 380**	**18 328**	**8 850**	**308**	**72 866**	**24 523**	**97 389**

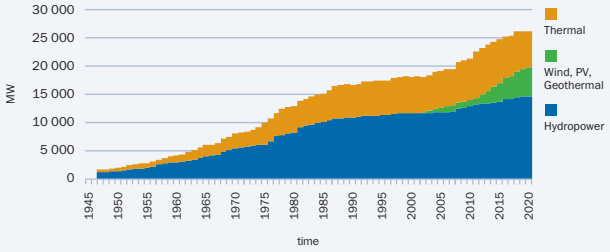
Gross generation mix in 2020

Energy source			GWh	Share in %		
Hydropower	Run of river	up to 10 MW	5 937	8.1	13.1	
		over 10 MW	24 756	34.0	54.6	
	Pumped storage	up to 10 MW	627	0.9	1.4	
		over 10 MW	14 061	19.3	31.0	
	Total hydro		**45 380**	**62.3**	**100.0**	
Thermal	Fossil fuels and derivatives	Hard coal	535	0.7		2.9
		Lignite				
		Coal derivatives (1)	1 811	2.5		9.9
		Oil derivatives (1)	610	0.8		3.3
		Natural gas	10 010	13.7		54.6
		Total	12 965	17.8		70.7
	Biofuels	Solid (2)	2 546	3.5		13.9
		Liquid (2)	0	0.0		0.0
		Gaseous (2)	589	0.8		3.2
		Sewage and landfill gases (2)	29	0.0		0.2
		Total (2)	3 165	4.3		17.3
	Other biofuels (3)		1 407	1.9		7.7
	Other fuels		790	1.1		4.3
	Total thermal (of which CHP)		**18 328** (17 053)	**25.2** (23.4)		**100.0** (93.0)
Renewables	Wind (4)		6 792	9.3	76.7	
	Photovoltaics (4)		2 058	2.8	23.3	
	Geothermal (4)		0	0.0	0.0	
	Total renewables (4)		**8 850**	**12.1**	**100.0**	
Other sources (5)			308	0.4		
Total			**72 866**	**100.0**		

(1) Coal and oil derivatives used for electricity generation
(2) Only biofuels as defined by Austrian law
(3) Biofuels as defined by Union law, except for (2)
(4) Injection by certified renewable power plants as defined by Austrian law
(5) Generation that can neither be broken down by primary energy source nor assigned to a type of power station

Power plants in Austria

Installed capacity at year end

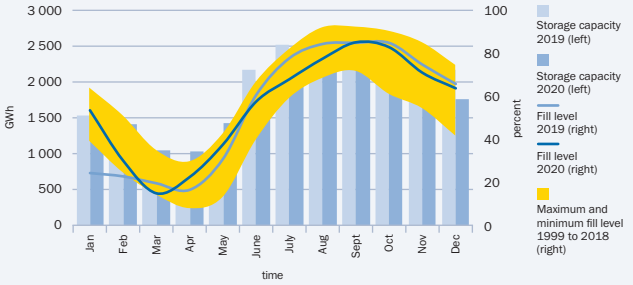


Installed capacity at year end

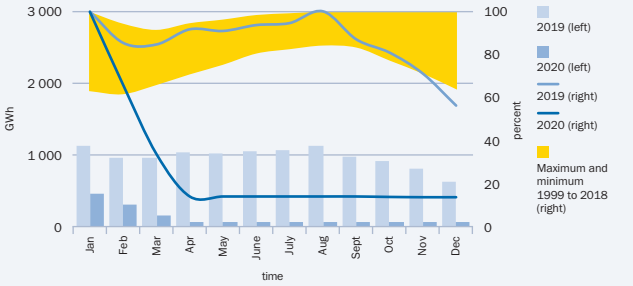
	Gross maximum capacity						
	Hydropower plants						
in MW	Run of river	Pumped storage	Total	Wind, PV, Geothermal	Thermal	Total	Net maximum capacity
1995	4 873	6 433	11 306		6 134	**17 440**	**16 959**
2000	5 202	6 461	11 663	49	6 315	**18 028**	**17 532**
2005	5 347	6 491	11 837	841	6 534	**19 213**	**18 703**
2010	5 412	7 520	12 932	1 054	7 433	**21 419**	**20 844**
2015	5 662	7 987	13 650	3 362	7 768	**24 780**	**24 177**
2018	5 723	8 795	14 517	4 505	7 192	**26 214**	**25 637**
2019	5 797	8 803	14 599	4 824	6 743	**26 166**	**25 616**
2020	**5 796**	**8 844**	**14 640**	**5 141**	**6 372**	**26 153**	**25 624**

Key figures on electricity infrastructure in Austria (pages 29 – 34)

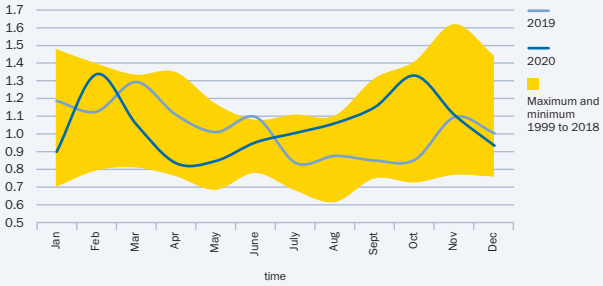
Storage capacity and fill levels at month end – large reservoirs of public generators



Fossil fuel stocks at month end – thermal power plants of public generators



Energy capability factor – run-of-river power plants of public generators



Annual energy capability factor – large run-of-river power plants of public generators

2019	2020	1999 to 2018 maximum	1999 to 2018 minimum
1.02	1.03	1.16	0.87

Energy availability – power plants of public generators (*)

	Thermal power plants			Pumped storage power plants		
in %	Availability factor	Utilisation factor	Outages	Availability factor	Utilisation factor	Outages
2000	76.7	32.6	5.9	93.6	18.6	2.6
2005	85.3	42.7	5.3	93.3	19.7	1.1
2010	84.3	35.9	15.0	84.2	18.7	7.7
2015	80.4	12.1	13.7	93.0	17.3	2.3
2018	83.6	18.5	16.4	93.2	15.7	4.3
2019	80.4	26.1	9.4	91.0	16.0	6.1
2020	**82.1**	**21.1**	**9.1**	**86.1**	**16.3**	**9.9**

(*) Power plants with a capacity of at least 25 MW that inject into Austrian control areas

Combined heat and power (CHP)

	Efficiency of thermal power plants in %			Capacity of thermal power plants in MW		
	With CHP		Without CHP	With CHP		Without CHP
	Overall efficiency (1)	Effective electric efficiency (2)	Efficiency (3)	Thermal capacity	Maximum capacity	Maximum capacity
2000	68.9	49.5	42.8	6 648	3 964	2 351
2005	69.9	52.9	41.5	7 545	4 511	2 023
2010	72.7	57.2	40.2	8 680	5 761	1 672
2015	72.0	52.5	37.7	8 667	6 063	1 705
2018	74.9	57.7	33.3	9 083	6 460	731
2019	73.3	56.6	32.7	8 957	6 307	436
2020	**73.7**	**55.9**	**33.1**	**8 716**	**5 937**	**435**

(1) Electricity and heat output divided by total fuel input
(2) Electricity output divided total by fuel input minus heat output
(3) Electricity output divided by fuel input

Firm capacity in 2020 – run-of-river plants of public generators (*)

Type of power plant	Up to 50 MW	50 MW to 100 MW	100 MW to 250 MW	Over 250 MW	Total
			Capacity in MW		
Run-of-river plants with pondage	204	250			**454**
Run-of-river plants without pondage	126	83	444	310	**963**
Total run-of-river plants	**330**	**333**	**444**	**310**	**1 418**
			Share in maximum capacity in %		
Run-of-river plants with pondage	37.0	46.3			**41.6**
Run-of-river plants without pondage	45.0	53.6	38.5	34.1	**38.6**
Total run-of-river plants	**39.7**	**47.9**	**38.5**	**34.1**	**39.5**

(*) Power plants with a capacity of at least 25 MW that inject into Austrian control areas

Public grid in Austria

Route length (*) of the public grid at year-end 2020

Voltage level	Overhead lines km	Overhead lines Share in %	Cables km	Cables Share in %	Total km
380 kV	1 386	0.6	54	0.0	**1 440**
220 kV	1 909	0.8	7	0.0	**1 916**
110 kV	6 124	2.6	736	0.3	**6 860**
1 kV to 110 kV	23 184	9.7	42 278	17.6	**65 462**
Up to 1 kV	29 023	12.1	135 448	56.4	**164 471**
Total	**61 626**	**25.7**	**178 523**	**74.3**	**240 148**

(*) Including high and ultra-high voltage lines of public generators

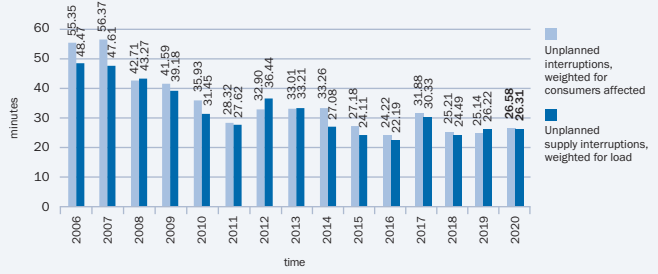
High voltage substations in the public grid at year-end 2020

Voltage level	Number of transformers	Total capacity in MVA
Primary voltage up to 200 kV	1 050	46 406
Primary voltage over 200 kV	88	31 365
High voltage to high, medium and low voltage	**1 138**	**77 771**

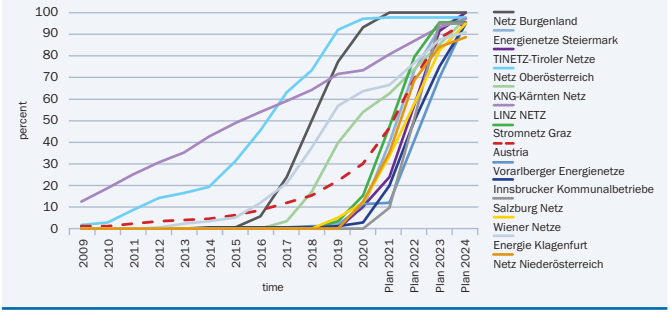
Medium voltage substations in the public grid at year-end 2020

Voltage level	Number of transformers	Total capacity in MVA
Medium voltage to medium and low voltage	**80 143**	**33 548**

Interruption of electricity supply
Average duration of unplanned interruptions, excluding extraordinary regional events



Smart meters installed until the end of 2020 and roll-out planned until 2024



The figure above testifies to the quality of electricity supply in Austria. The figure below provides an overview of the smart meters installed until the end of 2020 as well as of the roll-out planned until 2024, expressed in percentage terms.

Market statistics

Austrian gas market

Consumption structure

		Supply to consumers			
Consumer category	Unit	2019	2020	Change absolute	Change in %
Households	GWh	16 750	17 204	454	2.7
Small business and industry (1)	GWh	8 530	8 306	–224	–2.6
Medium-sized industry (2)	GWh	8 098	7 980	–117	–1.4
Large industry (3)	GWh	60 678	57 200	–3 478	–5.7
Statistical difference	GWh	184	–222		
Total supply to consumers	**GWh**	**94 238**	**90 467**	**–3 771**	**–4.0**

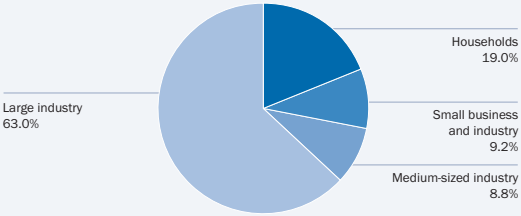
		Number of metering points (MP)		Number of Consumer (Cs)	
Consumer category	Unit	2019	2020	2019	2020
Households	1 000	1 220.5	1 213.1	1 170.4	1 160.0
Small business and industry (1)	1 000	87.3	86.2	68.8	68.6
Medium-sized industry (2)	1 000	7.1	7.3	0.9	0.9
Large industry (3)	1 000	2.9	2.2	0.2	0.2
Total number of metering points	**1 000**	**1 317.7**	**1 308.8**	**1 240.3**	**1 229.7**

		Average consumption (per MP)		Average consumption (per Cs)	
Consumer category	Unit	2019	2020	2019	2020
Households	kWh/..	13 724	14 181	14 311	14 830
Small business and industry (1)	kWh/..	97 749	96 400	123 932	121 076
Medium-sized industry (2)	MWh/..	1 138.4	1 098.0	8 957.6	8 827.8
Large industry (3)	MWh/..	21 223.3	26 035.4	311 166.8	302 644.8
Total	**kWh/..**	**71 516.2**	**69 124.4**	**75 980.8**	**73 567.3**

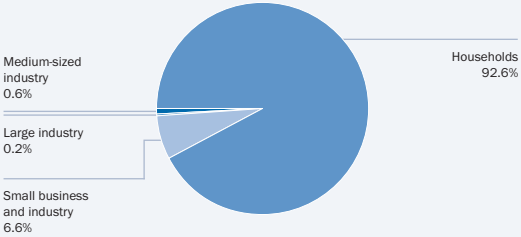
(1) annual withdrawal up to 2.8 GWh
(2) annual withdrawal from 2.8 GWh/a to 28 GWh
(3) annual withdrawal exceeding 28 GWh
Statistical difference: Difference between metered consumption and individual reporting. Negative values may result from discrepancies between the settlement period and calendar year

Structure of the Austrian natural gas market in terms of consumer groups and areas within Austria (pages 36 – 38)

Consumption structure – supply to consumers 2020



Consumption structure – number of metering points 2020



Consumption structure – supply to consumers by grid zone

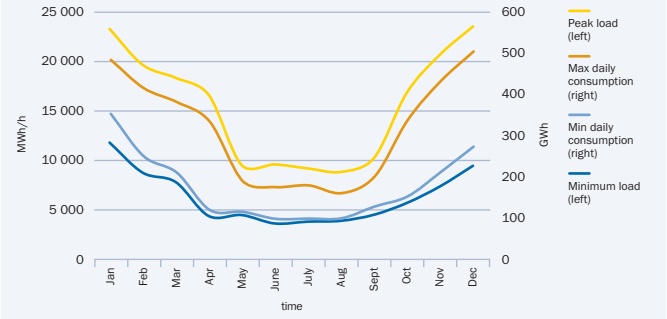
Federal province / grid zone		2019 in GWh	2020 in GWh	Change absolute	Change in %
Burgenland		2 335	2 310	–25	–1.1
Carinthia		1 924	1 890	–34	–1.8
Lower Austria		18 699	18 930	230	1.2
Upper Austria		24 697	22 362	–2 334	–9.5
Salzburg		3 134	3 047	–86	–2.8
Styria		14 006	13 666	–340	–2.4
Tyrol		4 297	4 203	–94	–2.2
Vorarlberg		2 428	2 380	–48	–2.0
Vienna		22 535	21 902	–633	–2.8
Austria	Statistical difference	184	–222		
	Total supply to consumers	**94 238**	**90 467**	**–3 771**	**–4.0**

Statistical difference: Difference between metered consumption and individual reporting per consumer category

Consumption structure – number of metering points by grid zone

Federal province / grid zone	2019 in 1 000 MP	2020 in 1 000 MP	Change absolute	Change in %
Burgenland	52.6	52.8	0.2	0.3
Carinthia	13.7	13.6	–0.1	–0.7
Lower Austria	294.4	294.4	0.0	0.0
Upper Austria	143.1	142.2	–1.0	–0.7
Salzburg	36.7	36.8	0.0	0.1
Styria	67.6	67.6	0.0	0.0
Tyrol	54.7	56.3	1.6	3.0
Vorarlberg	37.0	37.2	0.3	0.7
Vienna	617.8	607.8	–10.0	–1.6
Austria	**1 317.7**	**1 308.8**	**–9.0**	**–0.7**

Load indicators for 2020



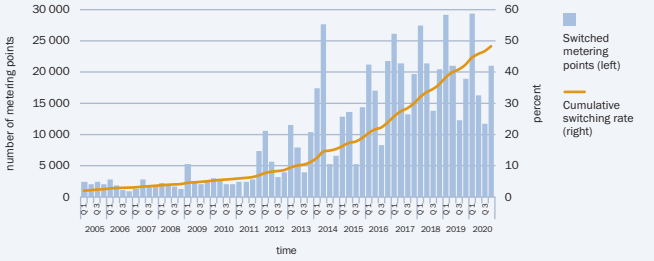
Load indicators

	Annual peak load	Annual minimum load	Maximum daily minimum load	Maximum daily consumption	Minimum daily consumption	Peak load utilisation period
Year	MWh/h	MWh/h	MWh/h	GWh	GWh	h
2016	24 591	3 585	18 228	525	90	3 577
2017	27 115	3 510	22 280	604	96	3 510
2018	27 169	3 470	21 113	596	96	3 339
2019	24 029	3 625	18 900	513	96	3 922
2020	**23 588**	**3 663**	**17 906**	**506**	**99**	**3 835**

Load indicators of natural gas supply in Austria

THE EFFECTS OF LIBERALISATION: GAS SWITCHING RATES

Supplier switches and switching rates (*)



(*) By number of metering points

Supplier switches and switching rates (*)

	2005	2010	2015	2019	2020
			Number of supplier switches		
Households	8 058	8 018	42 662	76 303	**72 028**
Small business and industry		1 711	3 330	4 685	**5 935**
Medium-sized industry	837	54	58	225	**242**
Large industry		16	9	21	**14**
Total	**8 895**	**9 799**	**46 059**	**81 234**	**78 219**
			Switching rates in %		
Households	0.6	0.6	3.4	6.3	**5.9**
Small business and industry		2.2	4.3	5.4	**6.9**
Medium-sized industry	1.2	6.0	6.9	3.2	**3.3**
Large industry		8.5	4.6	0.7	**0.6**
Total	**0.7**	**0.7**	**3.4**	**6.2**	**6.0**

(*) By number of metering points

Supplier switches (*) by grid zone					
Federal province/grid zone	2005	2010	2015	2019	2020
Burgenland	50	139	1 160	2 406	**2 769**
Carinthia	37	28	585	995	**1 031**
Lower Austria	2 180	3 142	12 557	20 780	**20 370**
Upper Austria	1 273	1 582	7 972	13 041	**12 523**
Salzburg	78	65	568	1 261	**1 386**
Styria	158	643	3 172	4 142	**4 405**
Tyrol		2	400	1 458	**1 880**
Vorarlberg		2	304	1 059	**1 036**
Vienna	5 119	4 196	19 341	36 092	**32 819**
Austria	**8 895**	**9 799**	**46 059**	**81 234**	**78 219**

(*) By number of metering points

Switching rates (*) by grid zone					
Federal province/grid zone in %	2005	2010	2015	2019	2020
Burgenland	0.1	0.3	2.3	4.6	**5.2**
Kärnten	0.3	0.2	4.2	7.2	**7.6**
Niederösterreich	0.8	1.1	4.3	7.1	**6.9**
Oberösterreich	0.9	1.1	5.5	9.1	**8.8**
Salzburg	0.3	0.2	1.6	3.4	**3.8**
Steiermark	0.3	1.0	4.7	6.1	**6.5**
Tirol		0.0	0.8	2.7	**3.3**
Vorarlberg		0.0	0.9	2.9	**2.8**
Wien	0.7	0.6	2.9	5.8	**5.4**
insgesamt	**0.7**	**0.7**	**3.4**	**6.2**	**6.0**

(*) By number of metering points

Gas switching rates (pages 40 – 41)

Austrian electricity market (public grid)

Consumption structure

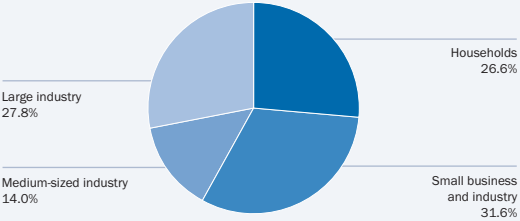
		Supply to consumers			
Consumer category	**Unit**	**2019**	**2020**	**Change** absolute	**Change** in %
Households	GWh	14 494	15 222	728	5.0
Small business and industry	GWh	19 708	18 023	–1 685	–8.5
Medium-sized industry	GWh	8 650	8 030	–619	–7.2
Large industry	GWh	16 307	15 919	–388	–2.4
Own use from the public grid	GWh	–472	–429		
Statistical difference	GWh	229	150		
Total supply to consumers	**GWh**	**58 915**	**56 915**	**–2 000**	**–3.4**

		Number of metering points		... of consumer	
Consumer category	**Unit**	**2019**	**2020**	**2019**	**2020**
Households	1 000	5 049.2	5 087.4	4 095.7	4 125.9
Small business and industry	1 000	1 092.5	1 095.2	624.5	615.1
Medium-sized industry	1 000	33.8	37.0	1.1	1.0
Large industry	1 000	35.3	32.0	0.2	0.2
Total number of metering points	**1 000**	**6 210.8**	**6 251.6**	**4 721.5**	**4 742.2**

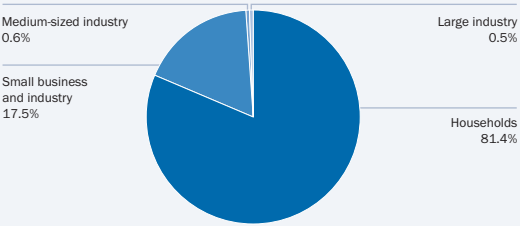
		Average consumption per metering point		... per consumer	
Consumer category	**Unit**	**2019**	**2020**	**2019**	**2020**
Households	kWh/...	2 871	2 992	3 539	3 689
Small business and industry	kWh/...	18 039	16 457	31 559	29 299
Medium-sized industry	kWh/...	256 063	217 121	8 091 500	8 177 644
Large industry	kWh/...	462 584	496 756	68 514 958	67 166 891
Total	**kWh/...**	**9 486**	**9 104**	**12 478**	**12 002**

Households: residential sector
Small business and other small consumers: Consumers with an annual withdrawal from the public grid of less than 4 GWh
Medium-sized industry: Consumers with an annual withdrawal from the public grid between 4 GWh and 20 GWh
Large industry: Consumers with an annual withdrawal from the public grid of more than 20 GWh
Own use from the public grid is no final consumption (no further breakdown)
Statistical difference: Difference between metered consumption and individual reporting.

Consumption structure – supply to consumers 2020



Consumption structure – number of metering points 2020



Consumption structure – supply to consumers by grid zone

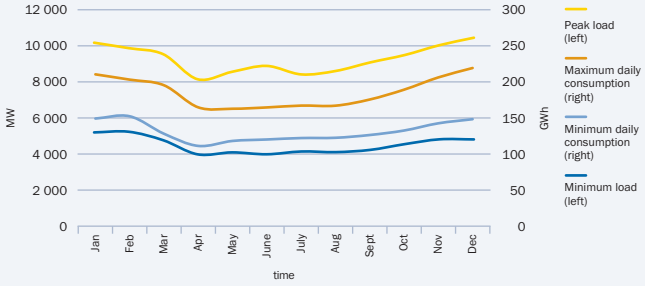
Federal province / grid zone		2019 in GWh	2020 in GWh	Change absolute	Change in %
Burgenland		1 656	1 648	–8	–0.5
Carinthia		4 242	4 140	–101	–2.4
Lower Austria		8 608	8 528	–80	–0.9
Upper Austria		11 067	10 789	–278	–2.5
Salzburg		3 711	3 560	–151	–4.1
Styria		8 803	8 480	–322	–3.7
Tyrol		5 725	5 429	–296	–5.2
Vorarlberg		2 703	2 611	–92	–3.4
Vienna		12 645	12 008	–636	–5.0
Austria	Own use from the public grid	–472	–429		
	Statistical difference	229	150		
	Total supply to consumers	**58 915**	**56 915**	**–2 000**	**–3.4**

Own use from the public grid is no final consumption (no further breakdown)
Statistical difference: Difference between metered consumption and individual reporting.

Consumption structure – number of metering points and consumer by grid zone

Federal province / grid zone	2019 in 1 000 MP	2020 in 1 000 MP	Change absolute	Change in %
Burgenland	217.8	218.8	1.1	0.5
Carinthia	395.3	397.2	1.9	0.5
Lower Austria	863.0	868.5	5.5	0.6
Upper Austria	1 042.6	1 049.2	6.5	0.6
Salzburg	441.4	445.2	3.8	0.9
Styria	952.0	955.5	3.5	0.4
Tyrol	491.3	496.0	4.7	1.0
Vorarlberg	243.7	248.7	5.0	2.0
Vienna	1 563.7	1 572.6	8.8	0.6
Austria	**6 210.8**	**6 251.6**	**40.8**	**0.7**

Load indicators for 2020



Load indicators

	Annual peak load	Annual minimum load	Maximum daily min. load	Daily baseload supply	Peak load utilisation time	Load factor (M)
	MW	MW	MW	GWh	h	
2016	10 397	4 085	6 969	46 777	5 947	0.68
2017	10 578	4 085	7 170	47 687	5 919	0.68
2018	10 721	4 255	7 351	48 040	5 862	0.67
2019	10 671	4 138	7 152	47 592	5 860	0.67
2020	**10 436**	**3 981**	**7 146**	**45 983**	**5 786**	**0.66**

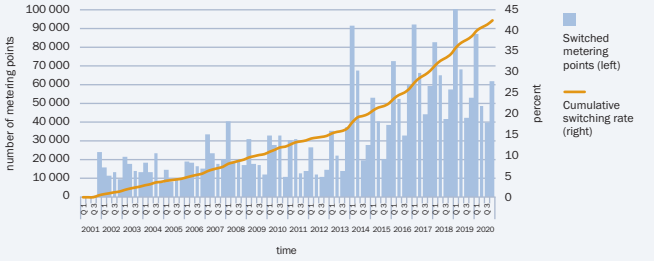
Peak load utilisation time = consumption / peak load [during reference period]
Load factor = peak load utilisation time / number of hours [in the reference period]

Structure of the Austrian electricity market in terms of consumer groups and areas within Austria (pages 42 – 44)

Load indicators of electricity supply in Austria (this page)

THE EFFECTS OF LIBERALISATION: ELECTRICITY SWITCHING RATES

Supplier switches and switching rates (*)



(*) By number of metering points

Supplier switches and switching rates (*)

	2005	2010	2015	2019	2020
	Number of supplier switches				
Households	22 768	69 781	102 571	210 655	**189 562**
Small business and industry	19 686	34 387	50 039	51 110	**47 884**
Medium-sized industry	164	224	163	1 926	**367**
Large industry	21	10	35	287	**24**
Total	**42 639**	**104 402**	**152 808**	**263 978**	**237 837**
	Switching rates in %				
Households	0.6	1.7	2.3	4.2	**3.7**
Small business and industry	1.2	2.1	3.0	4.7	**4.4**
Medium-sized industry	6.3	12.2	8.2	5.7	**1.0**
Large industry	11.0	5.2	16.7	0.8	**0.1**
Total	**0.8**	**1.8**	**2.5**	**4.3**	**3.8**

(*) By number of metering points

Supplier switches (*) by grid zone					
Federal province/grid zone	2005	2010	2015	2019	2020
Burgenland	335	1 402	3 826	6 446	**6 739**
Carinthia	5 078	3 760	13 795	16 759	**15 963**
Lower Austria	6 322	21 580	17 570	38 917	**35 305**
Upper Austria	11 952	20 077	36 731	66 831	**60 995**
Salzburg	1 057	1 476	3 757	7 173	**6 783**
Styria	3 502	26 180	32 533	38 846	**31 985**
Tyrol	2 028	1 706	4 140	11 170	**11 610**
Vorarlberg	240	607	2 221	3 754	**3 185**
Vienna	12 125	27 614	38 235	74 082	**65 272**
Austria	**42 639**	**104 402**	**152 808**	**263 978**	**237 837**

(*) By number of metering points

Switching rates (*) by grid zone					
Federal province/grid zone in %	2005	2010	2015	2019	2020
Burgenland	0.2	0.7	1.9	3.0	**3.1**
Carinthia	1.4	1.0	3.5	4.2	**4.0**
Lower Austria	0.8	2.6	2.1	4.5	**4.1**
Upper Austria	1.3	2.1	3.6	6.4	**5.8**
Salzburg	0.3	0.4	0.9	1.6	**1.5**
Styria	0.4	2.9	3.5	4.1	**3.3**
Tyrol	0.5	0.4	0.9	2.3	**2.3**
Vorarlberg	0.1	0.3	1.0	1.5	**1.3**
Vienna	0.8	1.9	2.5	4.7	**4.2**
Austria	**0.8**	**1.8**	**2.5**	**4.3**	**3.8**

(*) By number of metering points

Electricity switching rates (pages 46 – 47)

Green electricity injection and support payments
(Austria, 2020 and 2019)

Primary energy source	Injection in GWh	Net support in m €	Supported green electricity share in total supply, in %	Average support in cent/kWh
2020			(1)	
Supported small hydro	**1 455.7**	**81.0**	**2.6**	**4.78**
Other renewables	**8 092.9**	**905.1**	**14.2**	**11.18**
Wind	5 590.8	510.4	9.8	8.67
Wastes with high biog. fraction	1 094.7	136.7	1.9	13.38
Biogas (*)	570.5	99.6	1.0	17.53
Liquid biomass	0.1	0.0	0.00	13.21
Photovoltaics	826.9	158.1	1.45	26.56
Sewage and landfill gas	9.7	0.4	0.02	4.58
Geothermal	0.1	0.0	0.00	3.48
Total small hydro and other renewables	**9 548.6**	**986.1**	**16.8**	**10.33**
2019			(2)	
Supported small hydro	**1 333.6**	**78.7**	**2.3**	**5.90**
Other renewables	**9 072.6**	**998.6**	**15.4**	**11.01**
Wind	6 207.7	564.5	10.5	9.09
Wastes with high biog. fraction	1 581.8	195.4	2.7	12.35
Biogas (*)	561.4	97.6	1.0	17.38
Liquid biomass	0.2	0.0	0.00	6.16
Photovoltaics	707.3	140.3	1.20	19.84
Sewage and landfill gas	14.0	0.8	0.02	5.59
Geothermal	0.2	0.0	0.00	5.25
Total small hydro and other renewables	**10 406.2**	**1 077.3**	**17.7**	**10.35**

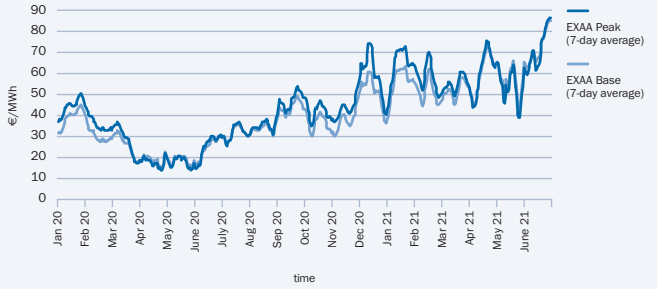
(*) incl. operation markups
(1) Relating to the total electricity supplied to consumers from the public grid in 2020, i.e. 56 870 GWh (as of 07/2021)
2) Relating to the total electricity supplied to consumers from the public grid in 2019, i.e. 58 876 GWh (as of 07/2021)
Source: Green power settlement agent OeMAG, E-Control, July 2021 – preliminary values

Wholesale markets

Electricity forward prices

Source: EEX

Electricity spot prices



Source: EXAA

Price developments in a variety of relevant wholesale markets (pages 49 – 55)

Electricity forward and spot prices

in €/MWh	EEX Base		EEX Peak	
	Day-ahead average	Y 2022 average	Day-ahead average	Y 2022 average
2019	40.16	48.60	43.39	59.88
2020	33.08	43.92	36.00	54.15
2021	59.01	58.04	61.27	68.37
January 2020	40.31	46.40	45.34	56.59
February 2020	29.55	45.05	35.07	55.13
March 2020	25.19	40.89	26.86	51.25
April 2020	19.49	41.40	18.29	51.87
May 2020	18.22	40.83	17.07	51.25
June 2020	25.86	42.78	26.63	53.18
July 2020	32.31	45.02	32.71	55.72
August 2020	34.65	44.18	36.07	54.45
September 2020	44.85	45.07	48.44	55.17
October 2020	35.65	43.32	40.88	53.40
November 2020	40.08	43.48	45.83	53.08
December 2020	50.50	48.38	58.61	58.36
January 2021	57.76	50.21	65.55	60.41
February 2021	50.97	52.51	57.23	62.74
March 2021	52.95	55.18	55.79	65.24
April 2021	61.76	58.19	62.47	68.33
May 2021	56.23	64.52	52.98	74.92
June 2021	74.22	66.87	73.66	77.80

Source: EXAA, EEX

Gas spot market prices

in €/MWh	TTF (NL) average	CEGH (AT) average		TTF (NL) average	CEGH (AT) average
2019	13.58	14.81	September 2020	11.18	11.36
2020	9.43	10.03	October 2020	13.91	13.23
2021	21.84	21.57	November 2020	13.84	13.02
January 2020	11.08	12.14	December 2020	16.25	15.26
February 2020	9.23	10.27	January 2021	20.45	18.98
March2020	8.54	9.46	February 2021	17.56	17.62
April 2020	6.52	8.04	March 2021	17.72	17.90
May 2020	4.61	6.25	April 2021	20.82	20.92
June 2020	5.00	5.81	May 2021	25.32	25.35
July 2020	4.95	6.45	June 2021	29.23	28.68
August 2020	7.48	8.77			

Sources: ICIS Heren, CEGH

Gas spot market prices

Sources: ICIS Heren, CEGH

Gas and coal forward prices

Y 2022					
	Gas (€/MWh) average	Coal (€/t) average		Gas (€/MWh) average	Coal (€/t) average
2019	18.76	65.78	September 2020	14.96	52.55
2020	15.10	54.71	October 2020	14.68	52.02
2021	19.06	61.27	November 2020	14.46	48.98
January 2020	17.37	60.19	December 2020	15.25	55.20
February 2020	16.63	59.52	January 2021	16.52	57.53
March 2020	14.91	55.72	February 2021	17.02	54.91
April 2020	14.60	55.56	March 2021	17.78	59.19
May 2020	14.23	54.03	April 2021	18.75	61.46
June 2020	14.46	54.09	May 2021	21.29	64.96
July 2020	14.78	56.07	June 2021	22.75	68.93
August 2020	14.85	52.63			

Source: EEX, ICE

Gas and coal forward prices

Source: EEX, ICE

Gas import price (2009 = 100)

	Import index	Change in %		Import index	Change in %
2009	100.00		2018	109.36	22.66
2010	111.16	11.16	2019	85.95	–21.40
2011	132.78	19.44	2020	57.82	–32.73
2012	146.56	10.38	January 2021	78.69	5.46
2013	147.29	0.50	February 2021	88.13	12.16
2014	122.20	–17.03	March 2021	89.01	1.00
2015	108.96	–10.83	April 2021	85.76	–3.65
2016	77.67	–28.72	May 2021	93.57	9.11
2017	89.16	14.79			

Source: Statistics Austria

Balancing gas procured by players in the daily regime

Source: Austrian Gas Clearing and Settlement (AGCS)

Brent oil forward market (next month)

	€/ barrel	$/ barrel	Month-on-month change of € in %
2019	57.18	64.09	
2020	38.67	44.07	
2021	54.11	65.17	
January 2020	54.52	60.53	
February 2020	50.80	55.38	–6.83
March 2020	35.18	38.97	–30.74
April 2020	30.12	32.96	–14.40
May 2020	31.30	33.90	3.92
June 2020	36.34	40.90	16.13
July 2020	37.74	43.26	3.85
August 2020	38.06	45.02	0.84
September 2020	35.60	41.98	–6.47
October 2020	35.53	41.84	–0.19
November 2020	37.15	43.99	4.57
December 2020	41.28	50.24	11.10
January 2021	45.40	55.24	9.98
February 2021	51.40	62.20	13.23
March 2021	55.16	65.64	7.31
April 2021	54.60	65.26	–1.01
May 2021	56.24	68.31	3.01
June 2021	60.89	73.34	8.27

Source: ICE, Oesterreichische Nationalbank (OeNB)

Brent oil forward market

Source: ICE, Oesterreichische Nationalbank (OeNB)

CO_2 emissions forward prices

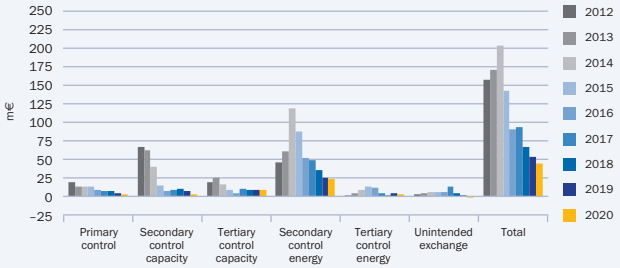
	EEX CO_2 Y22 (MidDec) in €/t		EEX CO_2 Y22 (MidDec) in €/t
2019	26.10	September 2020	28.50
2020	25.46	October 2020	25.70
2021	44.34	November 2020	26.99
January 2020	25.00	December 2020	31.31
February 2020	24.61	January 2021	33.76
March 2020	20.47	February 2021	38.22
April 2020	20.88	March 2021	41.30
May 2020	20.84	April 2021	45.74
June 2020	24.31	May 2021	52.82
July 2020	28.38	June 2021	53.33
August 2020	27.74		

Source: EEX

CO_2 emissions forward prices

Source: EEX

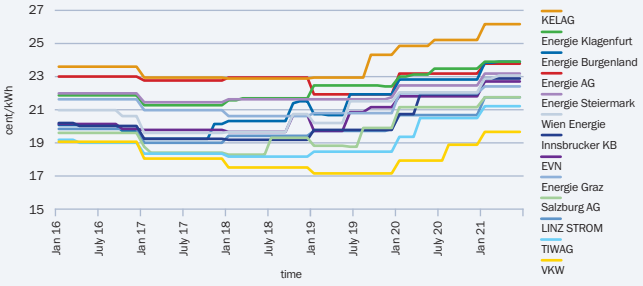
Cost of balancing services



Source: APG, own calculations

Retail markets

Development of incumbents' electricity retail prices (3 500 kWh)
(energy, system charges, taxes and surcharges)



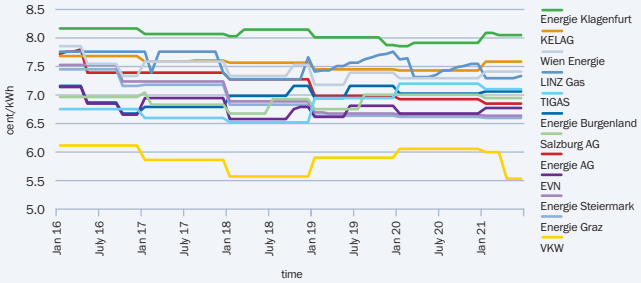
Source: E-Control, tariff calculator

Development of electricity retail prices

	Energy prices of all suppliers in cent/kWh			
	1st quartile	Median	3rd quartile	weighted average
January 2016	5.439	6.096	6.980	
July 2016	5.346	5.961	6.935	
January 2017	5.250	5.829	6.647	6.031
July 2017	5.260	5.790	6.610	6.021
January 2018	5.157	5.814	6.515	6.044
July 2018	5.295	5.920	6.710	6.201
January 2019	5.680	6.311	6.940	6.542
July 2019	5.838	6.490	7.125	6.948
January 2020	6.057	6.769	7.521	7.162
July 2020	6.306	7.039	7.717	7.256

Retail price developments for electricity and gas (pages 57 – 58)

Development of incumbents' gas retail prices (15 000 kWh)
(energy, system charges, taxes and surcharges)

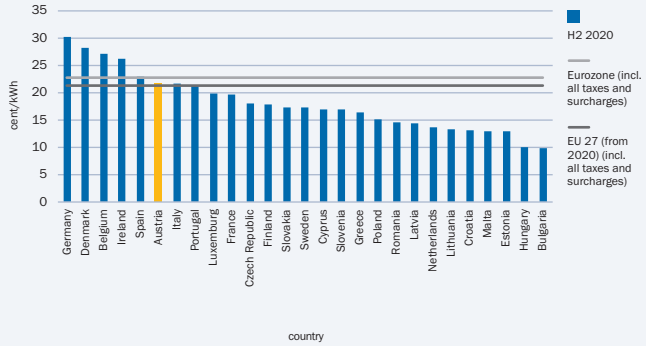


Source: E-Control, tariff calculator

Development of gas retail prices

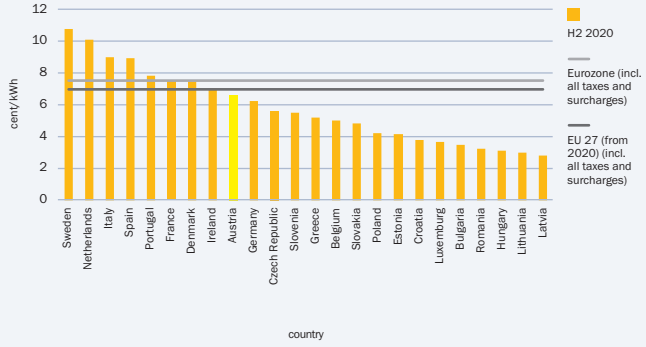
	Energy prices of all suppliers in cent/kWh			
	1st quartile	Median	3rd quartile	weighted average
January 2016	2.792	3.117	3.363	
July 2016	2.639	3.009	3.182	
January 2017	2.643	2.988	3.176	3.092
July 2017	2.650	2.956	3.167	3.122
January 2018	2.509	2.861	3.128	3.054
July 2018	2.607	2.913	3.198	3.218
January 2019	2.564	2.918	3.169	3.164
July 2019	2.680	3.032	3.209	3.240
January 2020	2.508	2.961	3.171	3.195
July 2020	2.570	2.848	3.297	3.203

Household electricity prices in Europe, H2 2020 (2 500 – 5 000 kWh)



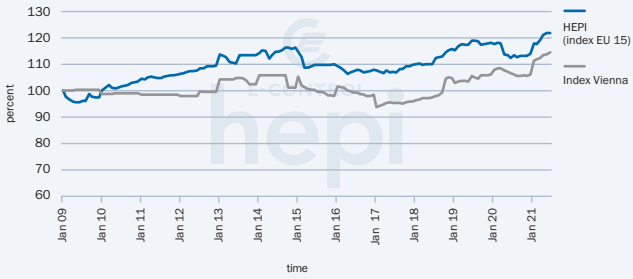
Source: Eurostat (as of 7th July 2021)

Household gas prices in Europe, H2 2020 (5 555.6 – 55 556 kWh)



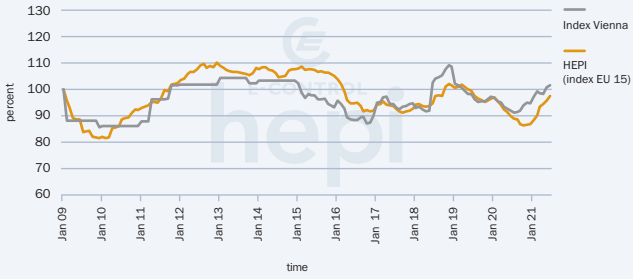
Source: Eurostat (as of 7th July 2021)

Household Energy Price Index for Europe (HEPI) – electricity



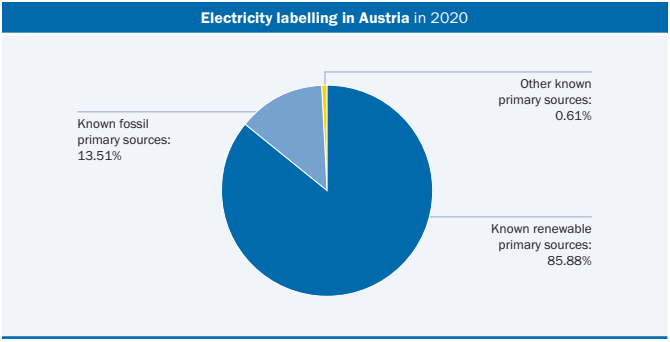
Sources: E-Control, MEKH and VaasaETT Ltd.

Household Energy Price Index for Europe (HEPI) – gas



Sources: E-Control, MEKH and VaasaETT

International electricity and gas price comparisons (pages 59 – 60)



Austrian electricity labelling in 2020

Terms and definitions

When using material from this brochure, please quote E-Control as your source of information.

Austrian electricity, natural gas and renewables statistics

The responsibility for statistical data collection on fossil fuels and electricity lies with the Federal Minister for Climate Action, Environment, Energy, Mobility, Innovation and Technology.
Statistical work on electricity and gaseous energy carriers is conducted by E-Control (section 52 Electricity Act and section 59 Natural Gas Act). The details and scope of this statistical work and regulations on the publication of the results are contained in the Electricity Statistics Ordinance 2016 (issued by the Ministry of Science, Research and Economy, FLG II no 17/2016) and the Gas Statistics Ordinance 2017 (issued by E-Control's Executive Board, FLG II no 417/2017).
The results of data collection and analyses are published on our website at www.e-control.at/en/statistics.

Glossary

Final energy consumption in energy statistics is the consumption of energy for any purpose other than transformation into other forms of energy. Final energy is the useful energy available to a consumer (e.g. for heating, lighting, mechanical uses). Neither transformation losses nor transport losses or natural gas supplied to gas-fired power stations are part of final energy consumption.

Supply to consumers in gas and electricity statistics is the energy withdrawn from the grid or autogenerated by consumers (final customers) and consumed by them. The concept embraces both gas supplied to gas-fired power plants and electricity supplied to refineries. This also holds for the electricity generated by refineries in their own power plants and used to process oil.

Gross domestic consumption in energy statistics is the energy needed to cover all domestic energy demand. Apart from final energy consumption and final non-energy consumption, it includes transformation losses, own use of the energy sector and non-energetic uses of fossil fuels (e.g. the use of coal for making electrodes).
Please note that breakdown according to individual energy sources or regional breakdown of the gross domestic consumption might yield negative values where export rates are high.

Useful energy consumption in energy statistics is the final energy consumption minus consumption losses (depending on the equipment's efficiency e.g. in lighting, heating or cooling devices). Useful energy can normally be broken down into space heating and cooling, process heat (steam production and industrial furnaces), mechanical uses (stationary engines), transport, IT and lighting, and electrochemical uses.

Electricity and natural gas balances in electricity and natural gas statistics cover the respective markets and rely solely on physical flow data. Please note that the electricity balance includes the total gross electricity production at the generator terminals (i.e. also electricity produced in pumped storage plants) but also energy consumption for pumping. The natural gas balance includes all imports and exports metered at Austria's borders, and all storage movements, regardless of whether the gas is destined for domestic or foreign consumption.

Natural gas conditions

All volumes in Nm^3 refer to natural gas in normal state, i.e.

- temperature: 0 °C
- humidity: 0 percent
- absolute pressure: 1 013.25 mbar

Latest valid calorific value (kWh/Nm^3): 11.3

Public grid means the grid in the Austrian control areas APG, TIRAG (up to 2010) and VKW (up to 2011 incl. VIW) as well as the Austrian supply areas connected to foreign control areas.

Fossil fuels are fuels from natural resources formed from biomass through natural processes over time. The term is also used to refer to secondary fuels produced from primary fossil fuels (e.g. coke or gasoline).

Renewable energy is generated from geothermal energy, solar power or gravity, i.e. from non-finite energy sources, or from biomass as a finite energy source.
Please note that electricity statistics differentiate between (i) hydropower, (ii) wind, solar and geothermal energy, and (iii) biofuels; renewables shares are itemised according to generation types.

Biofuels as used in the Austrian Green Electricity Act are in particular the following renewable, non-fossil energy sources: biomass, wastes containing a high biogenous fractions, landfill and sewage gas, biogas, meat and bone meal, black liquor, and sewage sludge.

Units of mass and volume are physical units for the purpose of metering mass or volume in different states of matter (solid, liquid, gaseous), such as litres or cubic metres.

Energy units quantify a fuel's or energy source's energy content. Electric energy and hydropower are measured in kilowatt hours (kWh), the heat of thermal energy in calories or joule. In the interest of comparability, solid, liquid and gaseous fuels may also be measured in energy units; converting physical into energy units is achieved by means of conversion factors that relate one unit of a fuel to the heat produced from it (see the calorific values in different energy balances).

Units of measurement

1 V	=	1 volt				
1 A	=	1 ampere				
1 W	=	1 watt				
1 Hz	=	1 hertz	=	1 oscillation/sec		
1 J	=	1 joule	=	1 watt second (Ws)	=	$0.27778 \cdot 10^{-3}$ Wh
1 Wh	=	1 watt hour	=	$3.6 \cdot 10^{3}$ joule		

Most common multiple and sub-multiple prefixes

Multiple	Sub-multiple
10^{1} deca (da)	10^{-1} deci (d)
10^{2} hecto (h)	10^{-2} centi (c)
10^{3} kilo (k)	10^{-3} milli (m)
10^{6} mega (M)	10^{-6} micro (µ)
10^{9} giga (G)	10^{-9} nano (n)
10^{12} tera (T)	10^{-12} pico (p)
10^{15} peta (P)	10^{-15} femto (f)
10^{18} exa (E)	10^{-18} atto (a)

Units used

1 kV	=	1 kilovolt	=	1 000 V
1 kW	=	1 kilowatt	=	1 000 W
1 MW	=	1 megawatt	=	1 000 kW
1 GW	=	1 gigawatt	=	1 000 MW
1 TW	=	1 terawatt	=	1 000 GW

1 kWh	=	1 kilowatt hour	=	1 000 Wh
1 MWh	=	1 megawatt hour	=	1 000 kWh
1 GWh	=	1 gigawatt hour	=	1 000 MWh
1 TWh	=	1 terawatt hour	=	1 000 GWh

1 kJ	=	1 kilojoule	=	1 000 J
1 MJ	=	1 megajoule	=	1 000 kJ
1 GJ	=	1 gigajoule	=	1 000 MJ
1 TJ	=	1 terajoule	=	1 000 GJ

Multilingual terms

Deutsch	English	Français
Laufkraftwerk	run-of-river power plant	centrale gravitaire
Speicherkraftwerk	storage power plant	station de pompage-turbinage
Wasserkraftwerk	hydropower plant	centrale hydroélectrique
Steinkohle	hard coal	houille
Braunkohle	lignite	lignite
Derivate	derivative	dérivés
Erdgas	natural gas	gaz naturel
Fossile Brennstoffe	fossil fuels	combustibles fossiles
Biogene Brennstoffe	biofuels	biocombustibles
Wärmekraftwerk	thermal power plant	centrale thermique
Windkraftwerk	wind power plant	centrale éolienne
Photovoltaikanlage	solar/photovoltaic power plant	centrale photovoltaïque
Geothermie	geothermal energy	géothermie
Speicherentnahme	storage withdrawal	prélèvement
Speichereinpressung	storage injection	stockage
Eigenverbrauch	own use/consumption	usage propre
Verlust / Netzverlust	(grid) losses	pertes en ligne
Pumpstromaufwand / Verbrauch f. Pump-speicherung	consumption for pumped storage / pumping	consommation des pompes
Haushalte	households	secteur résidentiel
Sonstige Kleinkunden	other small consumers	autres clients profilés
Lastganggemessene Kunden	load-metered consumers	clients mesurés
Inlandstromverbrauch	domestic electricity consumption	consommation intérieure
Abgabe an Endkunden	supply to consumers	livraison aux consommateurs
Energetischer Endverbrauch	final energy consumption	consommation finale d'énergie
Nutzenergie(verbrauch)	useful energy (consumption)	énergie utile (consommation)
Heizwert	net calorific value	pouvoir calorifique inférieur
Brennwert	gross calorific value	pouvoir calorifique supérieur

International conversion factors

Units of mass

To: / From:	kg	t	lt	st	lb
	Multiply by:				
kg Kilogramme	**1**	0.001	9.84×10^{-4}	1.102×10^{-3}	2.2046
t Ton	1 000	**1**	0.984	1.1023	2 204.6
lg Long ton	1 016	1.016	**1**	1.120	2 240
st Short ton	907.2	0.9072	0.893	**1**	2 000
lb Pound	0.454	4.54×10^{-4}	4.46×10^{-4}	5.0×10^{-4}	**1**

Source: IEA

Units of energy

To: / From:	TJ	Gcal	Mtoe	MMBtu	GWh
	Multiply by:				
TJ Terajoule	**1**	238.8	2.388×10^{-5}	947.8	0.2778
Gcal Gigacalorie	4.1868×10^{-3}	**1**	10^{-7}	3.968	1.163×10^{-3}
Mtoe Million tons of oil equivalent	4.1868×10^{4}	10^{07}	**1**	3.967×10^{7}	11 630
MBtu Million British thermal units	1.0551×10^{-3}	0.252	2.52×10^{-8}	**1**	2.931×10^{-4}
GWh Gigawatt hour	3.60	860	8.6×10^{-5}	3412	**1**

Source: Eurostat, IEA

Units of volume

To: / From:	US gal	UK gal	bbl	ft^3	l	m^3
	Multiply by:					
US gal US gallon	**1**	0.8327	0.02381	0.1337	3.785	0.0038
UK gal UK gallon	1.201	**1**	0.02859	0.1605	4.546	0.0045
bbl Barrel	42.0	34.97	**1**	5.615	159	0.159
ft^3 Cubic foot	7.48	6.229	0.1781	**1**	28.3	0.0283
l Litre	0.2642	0.22	0.0063	0.0353	**1**	0.001
m^3 Cubic metre	264.2	220	6.289	35.3147	1 000	**1**

Source: IEA

Calorific values in the Austrian energy balance

Statistics Austria, arithmetic means over the past five years

Energy source	Gigajoule / ...	Gross domestic consumption	Final energy consumption
Hard coal	t	28.37	27.78
Lignite	t	21.02	21.02
Brown coal briquettes	t	19.80	19.80
Coke oven coke	t	28.60	28.60
Crude oil	t	42.50	–
Petrol	t	41.16	41.52
Diesel	t	42.39	42.39
Gas oil	t	42.83	42.83
Fuel oil	t	41.11	41.43
Natural gas	1 000 cu m	36.59	36.59
Industrial waste	t	14.90	17.84
Fuelwood	t	14.31	14.31
Biofuels	t	11.93	13.07
Geothermal energy	MWh	3.60	3.60
District heat	MWh	–	3.60
Hydropower	MWh	3.60	–
Wind and photovoltaics	MWh	3.60	–
Electric energy	MWh	3.60	3.60

Source: Statistics Austria

Notes

Editorial

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