

**Table 32**

**Production of electricity - by type**

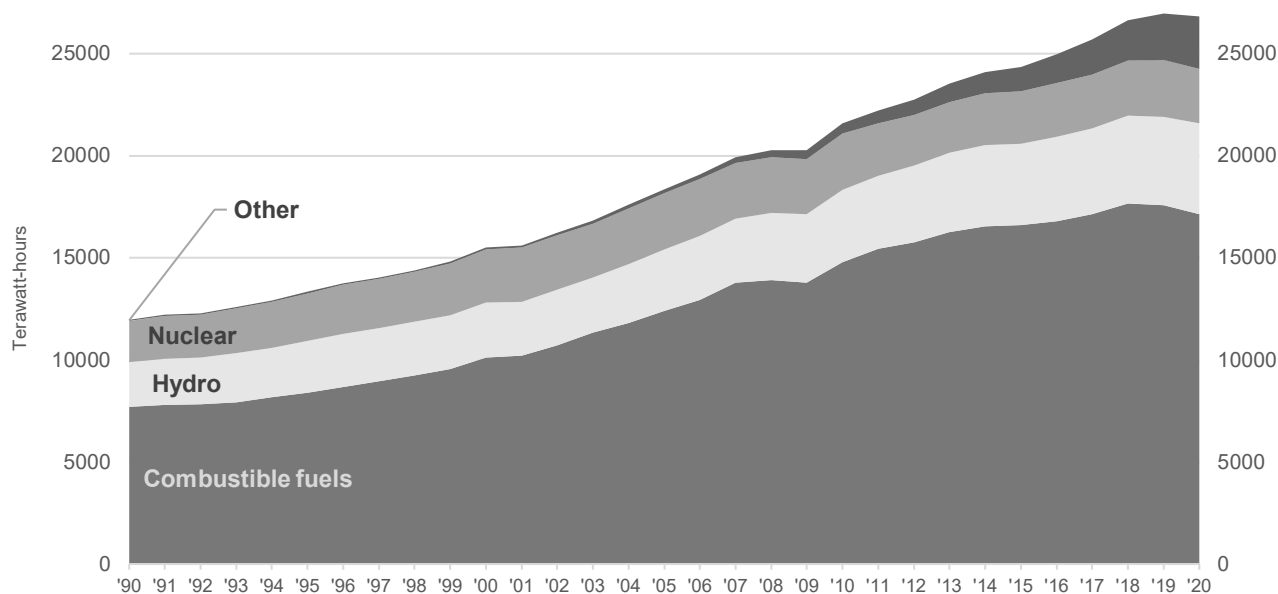
Gigawatt-hours

**Table Notes**

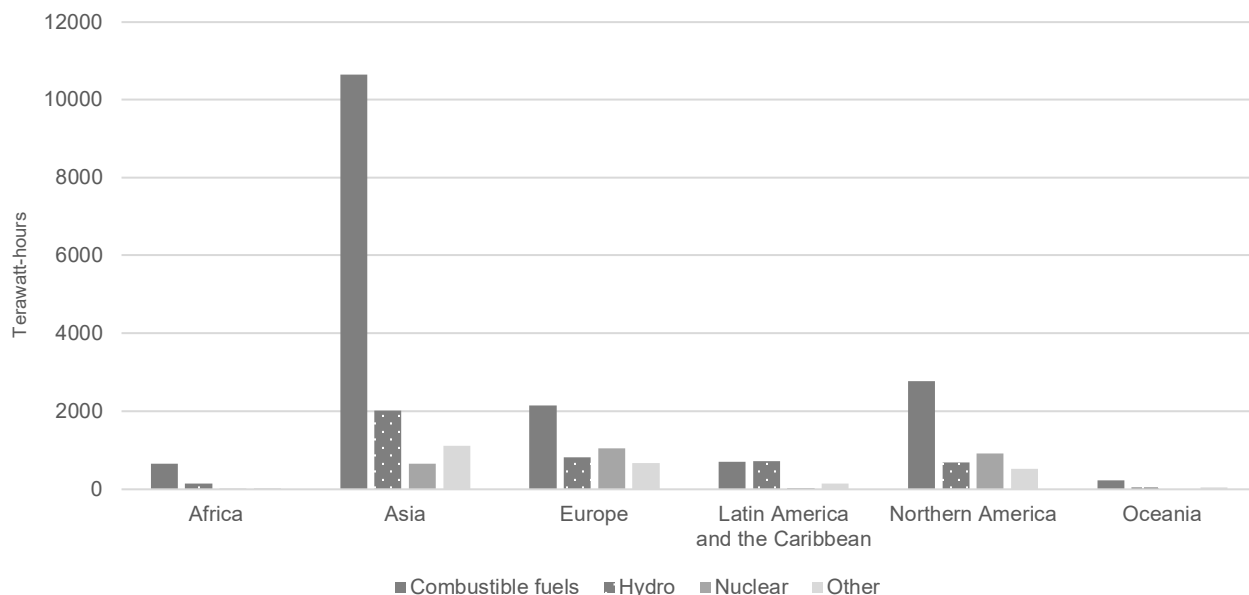
For this table, **Other** under total producers refers to geothermal, tide, wave, marine, electricity from chemical heat, and other non-specified sources. **Other** under autoproducers refers to nuclear (if any), wind, solar, tide, wave, marine, electricity from chemical heat, and other non-specified sources. **Other** under main activity producers refers to wind, solar, tide, wave, marine, electricity from chemical heat, and other non-specified sources.

Please refer to the Definitions Section on pages ix to xv for the appropriate product description /classification, and xvi to xvii for the descriptions of relevant flows.

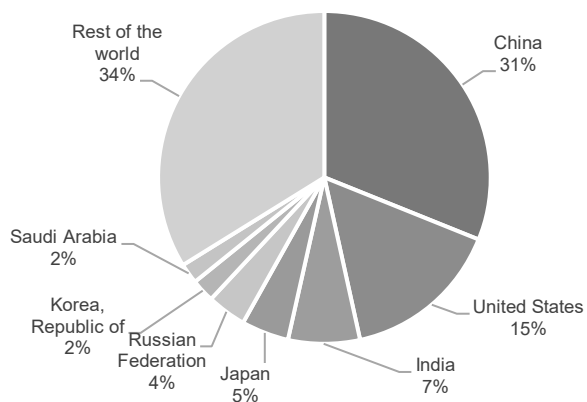
**Figure 75: World electricity generation by source, 1990-2020**



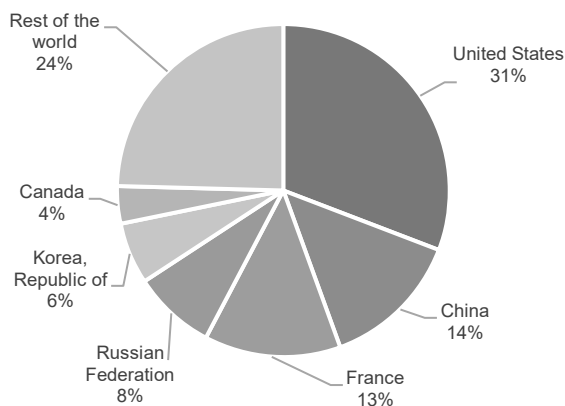
**Figure 76: World production of electricity by source and region, 2020**



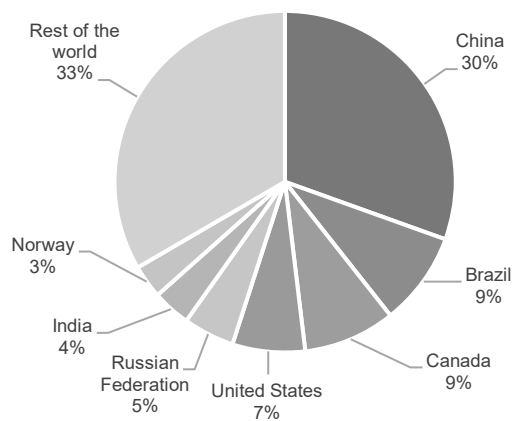
**Figure 77: Major countries producing electricity from combustible fuels, 2020**



**Figure 79: Major countries producing nuclear electricity, 2020**



**Figure 78: Major countries producing hydro electricity, 2020**



**Figure 80: Major countries producing electricity from other sources, 2020**

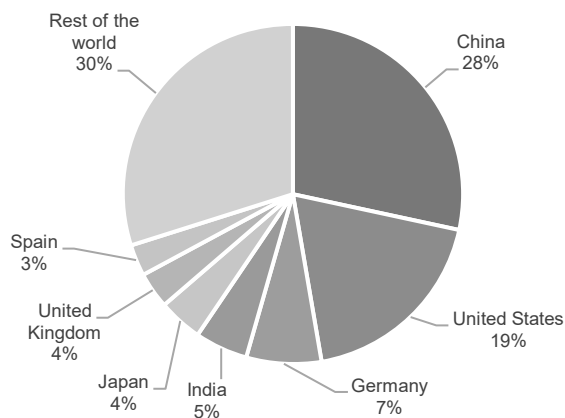


Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
World	2017	25,678,362	17,136,871	4,187,399	2,634,659	1,117,933	429,619	171,880
	2018	26,642,361	17,655,571	4,302,950	2,708,593	1,272,661	565,001	137,586
	2019	26,964,328	17,565,258	4,350,255	2,786,987	1,426,810	693,987	141,032
	2020	26,815,938	17,131,921	4,447,719	2,673,935	1,596,313	836,603	129,447
Africa	2017	827,967	659,198	128,703	15,743	11,651	6,332	6,340
	2018	852,683	673,805	138,639	11,580	14,185	7,671	6,802
	2019	861,532	669,805	142,603	13,252	18,220	10,766	6,885
	2020	848,027	649,136	150,429	9,903	17,652	14,287	6,621
Algeria	2017	76,018	75,383	*56	..	*19	*560	..
	2018	76,662	75,880	*117	..	*11	*655	..
	2019	81,533	80,691	*152	..	*12	*678	..
	2020	79,155	78,433	50	..	8	665	..
Angola	2017	10,737	3,066	7,653	..	..	18	..
	2018	12,869	3,058	9,793	..	..	18	..
	2019	15,474	4,582	10,874	..	..	18	..
	2020	16,400	4,428	11,954	..	..	18	..
Benin	2017	331	325	1	..	..	5	..
	2018	202	197	0	..	..	5	..
	2019	529	521	0	..	..	8	..
	2020	989	982	0	..	..	7	..
Botswana	2017	3,022	3,020	..	..	..	2	..
	2018	3,105	3,100	..	..	..	5	..
	2019	2,508	2,504	..	..	..	5	..
	2020	2,182	2,176	..	..	..	6	..
Burkina Faso	2017	1,095	958	128	..	..	9	..
	2018	1,021	875	91	..	..	54	..
	2019	752	588	105	..	..	59	..
	2020	698	528	112	..	..	57	..
Burundi	2017	189	80	100	..	..	8	..
	2018	246	105	133	..	..	8	..
	2019	269	129	132	..	..	8	..
	2020	276	92	176	..	..	8	..
Cabo Verde	2017	426	351	..	..	68	7	..
	2018	431	341	..	..	80	10	..
	2019	444	362	..	..	74	9	..
	2020	420	350	..	..	64	7	..
Cameroon	2017	8,082	2,976	5,090	..	..	16	..
	2018	8,581	3,539	5,023	..	..	19	..
	2019	8,476	3,227	5,229	..	..	20	..
	2020	9,009	3,555	5,434	..	..	20	..
Central African Rep.	2017	145	*1	144	..	..	0	..
	2018	147	*1	146	..	..	0	..
	2019	149	*1	148	..	..	0	..
	2020	*150	*1	*149	..	..	0	..
Chad	2017	308	299	..	..	9	..	..
	2018	312	303	..	..	9	..	..
	2019	317	308	..	..	9	..	..
	2020	335	326	..	..	9	..	..
Comoros	2017	*91	*91	..	..	..	..	..
	2018	*98	*98	..	..	..	..	..
	2019	*108	*108	..	..	..	..	..
	2020	*130	*130	..	..	..	..	..
Congo	2017	2,965	1,761	1,203	..	..	1	..
	2018	3,096	2,001	1,094	..	..	1	..
	2019	3,655	2,807	847	..	..	1	..
	2020	3,833	2,931	900	..	..	1	..

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
2,134,576	1,876,027	77,758	180,790	23,543,786	15,260,844	4,109,641	2,634,659	1,538,642
2,226,824	1,959,079	76,363	191,381	24,415,537	15,696,491	4,226,587	2,708,593	1,783,867
2,317,522	2,024,050	75,388	218,084	24,646,806	15,541,208	4,274,867	2,786,987	2,043,744
2,229,171	1,916,484	72,121	240,566	24,586,768	15,215,437	4,375,598	2,673,935	2,321,797
51,996	40,469	727	10,800	775,971	618,729	127,976	15,743	13,523
58,741	45,418	1,028	12,295	793,941	628,387	137,611	11,580	16,362
65,609	51,543	890	13,176	795,923	618,262	141,713	13,252	22,695
65,615	51,900	917	12,797	782,412	597,235	149,511	9,903	25,763
5,120	5,120	..	..	70,898	70,263	*56	..	*579
5,437	5,437	..	..	71,225	70,443	*117	..	*665
5,508	5,508	..	..	76,025	75,183	*152	..	*690
5,317	5,317	..	..	73,838	73,115	50	..	673
430	430	..	..	10,307	2,636	7,653	..	18
421	421	..	..	12,448	2,637	9,793	..	18
418	418	..	..	15,056	4,165	10,874	..	18
395	395	..	..	16,005	4,033	11,954	..	18
98	98	..	..	233	226	1	..	5
114	114	..	..	88	83	0	..	5
163	162	..	1	366	359	0	..	6
166	165	..	1	823	817	0	..	6
..	..	..	..	3,022	3,020	..	..	2
..	..	..	..	3,105	3,100	..	..	5
..	..	..	..	2,508	2,504	..	..	5
..	..	..	..	2,182	2,176	..	..	6
..	..	..	..	1,095	958	128	..	9
..	..	..	..	1,021	875	91	..	54
..	..	..	..	752	588	105	..	59
..	..	..	..	698	528	112	..	57
7	7	..	..	182	74	100	..	8
6	6	..	..	240	99	133	..	8
5	5	..	..	264	124	132	..	8
6	6	..	..	270	87	176	..	8
*1	*1	..	..	425	350	..	..	75
*1	*1	..	..	430	340	..	..	90
*1	*1	..	..	444	361	..	..	83
*1	*1	..	..	419	349	..	..	70
2,690	2,690	..	..	5,391	286	5,090	..	16
3,245	3,245	..	..	5,336	293	5,023	..	19
2,990	2,990	..	..	5,486	237	5,229	..	20
3,373	3,373	..	..	5,635	181	5,434	..	20
..	..	..	..	145	*1	144	..	0
..	..	..	..	147	*1	146	..	0
..	..	..	..	149	*1	148	..	0
..	..	..	..	*150	*1	*149	..	0
..	..	..	..	308	299	..	..	9
..	..	..	..	312	303	..	..	9
..	..	..	..	317	308	..	..	9
..	..	..	..	335	326	..	..	9
..	..	..	..	*91	*91	..	..	..
..	..	..	..	*98	*98	..	..	..
..	..	..	..	*108	*108	..	..	..
..	..	..	..	*130	*130	..	..	..
1,761	1,761	..	..	1,204	..	1,203	..	1
2,001	2,001	..	..	1,095	..	1,094	..	1
2,807	2,807	..	..	848	..	847	..	1
2,931	2,931	..	..	901	..	900	..	1

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Côte d'Ivoire	2017	10,121	8,074	2,047	..	..	..	..
	2018	10,058	7,096	2,962	..	..	..	..
	2019	10,697	7,197	3,481	..	..	18	..
	2020	11,274	7,887	3,376	..	..	11	..
Dem. Rep. of the Congo	2017	9,988	*506	9,482	..	..	..	..
	2018	12,067	976	11,064	..	..	27	..
	2019	12,060	*985	11,045	..	..	29	..
	2020	12,929	*985	11,914	..	..	30	..
Djibouti	2017	*59	*59	..	..	..	1	..
	2018	55	55	..	..	..	1	..
	2019	92	91	..	..	..	1	..
	2020	126	125	..	..	..	*1	..
Egypt	2017	195,150	179,520	12,850	..	2,200	580	..
	2018	202,838	187,341	12,726	..	2,234	537	..
	2019	194,279	175,998	13,121	..	3,689	1,471	..
	2020	197,201	173,500	15,038	..	4,233	4,430	..
Equatorial Guinea	2017	1,334	896	438	..	..	..	..
	2018	1,355	912	443	..	..	..	..
	2019	*1,363	*913	*450	..	..	..	..
	2020	*1,370	*915	*455	..	..	..	..
Eritrea	2017	334	326	..	..	2	6	..
	2018	352	340	..	..	2	10	..
	2019	363	350	..	..	2	11	..
	2020	375	361	..	..	2	13	..
Eswatini	2017	415	297	118	..	..	0	..
	2018	520	311	209	..	..	0	..
	2019	585	313	270	..	..	2	..
	2020	*541	*310	229	..	..	*2	..
Ethiopia	2017	12,335	27	11,753	..	533	22	..
	2018	13,265	31	12,681	..	533	20	..
	2019	14,558	35	13,655	..	848	20	..
	2020	15,526	35	14,850	..	608	32	..
Gabon	2017	2,278	1,347	929	..	..	2	..
	2018	2,295	1,307	987	..	..	2	..
	2019	2,306	1,318	987	..	..	2	..
	2020	2,423	1,434	987	..	..	2	..
Gambia	2017	317	314	..	..	0	*4	..
	2018	392	388	..	..	0	*4	..
	2019	460	456	..	..	0	*4	..
	2020	482	478	..	..	0	*4	..
Ghana	2017	14,248	8,604	5,616	..	..	28	..
	2018	16,425	10,375	6,017	..	..	33	..
	2019	18,368	11,065	7,252	..	..	52	..
	2020	20,170	12,820	7,293	..	..	57	..
Guinea	2017	1,753	541	1,212	..	..	..	..
	2018	1,914	732	1,182	..	..	..	..
	2019	2,019	*740	1,280	..	..	..	..
	2020	2,454	*970	1,484	..	..	..	..
Guinea-Bissau	2017	*80	*79	..	..	..	1	..
	2018	*81	*80	..	..	..	1	..
	2019	*82	*80	..	..	..	2	..
	2020	*82	*80	..	..	..	*2	..
Kenya	2017	10,360	2,766	2,777	..	61	..	4,756
	2018	11,182	1,679	3,986	..	376	14	5,128
	2019	11,621	1,526	3,205	..	1,563	92	5,235
	2020	11,604	891	4,233	..	1,331	88	5,060

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
173	173	..	..	9,948	7,901	2,047	..	..
61	61	..	..	9,997	7,035	2,962	..	..
65	65	..	..	10,631	7,132	3,481	..	18
72	72	..	..	11,202	7,815	3,376	..	11
*658	*500	158	..	9,330	6	9,324	..	..
1,311	971	340	..	10,756	5	10,724	..	27
*1,164	*980	184	..	10,896	5	10,861	..	29
*1,181	*980	201	..	11,749	5	11,713	..	30
..	..	..	..	*59	*59	..	..	1
..	..	..	..	55	55	..	..	1
..	..	..	..	92	91	..	..	1
..	..	..	..	126	125	..	..	*1
*5,600	*5,600	..	..	189,550	173,920	12,850	..	2,780
6,078	6,078	..	..	196,760	181,263	12,726	..	2,771
11,554	11,554	..	..	182,725	164,444	13,121	..	5,160
11,408	11,408	..	..	185,793	162,092	15,038	..	8,663
..	..	..	..	1,334	896	438	..	..
..	..	..	..	1,355	912	443	..	..
..	..	..	..	*1,363	*913	*450	..	..
..	..	..	..	*1,370	*915	*455	..	..
16	16	..	..	318	310	..	..	8
19	19	..	..	333	321	..	..	12
19	19	..	..	344	331	..	..	13
19	19	..	..	357	342	..	..	15
298	297	*1	0	117	..	117	..	..
312	311	*1	0	208	..	208	..	..
316	313	*1	2	269	..	269	..	..
*313	*310	*1	*2	227	..	227	..	..
23	23	..	..	12,312	4	11,753	..	555
26	26	..	..	13,239	5	12,681	..	553
30	30	..	..	14,528	5	13,655	..	868
30	30	..	..	15,496	5	14,850	..	640
235	228	5	2	2,043	1,119	924	..	..
226	218	6	2	2,069	1,088	981	..	..
222	214	6	2	2,085	1,104	981	..	..
243	236	6	2	2,179	1,198	981	..	..
*37	*37	..	..	280	277	..	..	*4
*37	*37	..	..	354	351	..	..	*4
*38	*38	..	..	422	418	..	..	*4
*38	*38	..	..	444	440	..	..	*4
*180	*180	..	..	14,068	8,424	5,616	..	28
*180	*180	..	..	16,245	10,195	6,017	..	33
*180	*180	..	..	18,188	10,885	7,252	..	52
..	..	..	..	20,170	12,820	7,293	..	57
465	465	..	..	1,288	76	1,212	..	..
619	619	..	..	1,295	114	1,182	..	..
*625	*625	..	..	1,394	*115	1,280	..	..
*850	*850	..	..	1,604	*120	1,484	..	..
*19	*19	..	..	*61	*60	..	..	1
*19	*19	..	..	*62	*61	..	..	1
*19	*19	..	..	*63	*61	..	..	2
*19	*19	..	..	*63	*61	..	..	*2
231	231	..	..	10,129	2,534	2,777	..	4,818
133	133	..	..	11,049	1,546	3,986	..	5,517
212	212	..	..	11,408	1,313	3,205	..	6,890
137	137	..	..	11,467	755	4,233	..	6,480

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Lesotho	2017	502	*1	501	..	..	..	..
	2018	517	1	517	..	..	..	..
	2019	393	1	392	..	..	..	..
	2020	427	*1	426	..	..	..	..
Liberia	2017	*478	*351	*124	..	..	*3	..
	2018	*405	*277	*124	..	..	*4	..
	2019	*418	*290	*124	..	..	*4	..
	2020	*446	*318	*124	..	..	*4	..
Libya	2017	33,282	33,274	..	..	..	8	..
	2018	34,171	34,164	..	..	..	8	..
	2019	34,629	34,621	..	..	..	8	..
	2020	29,499	29,491	..	..	..	8	..
Madagascar	2017	1,983	1,177	783	..	0	23	..
	2018	2,099	1,107	968	..	0	*23	..
	2019	2,178	1,259	886	..	0	32	..
	2020	2,167	1,317	818	..	0	32	..
Malawi	2017	1,917	*54	1,824	..	..	39	..
	2018	1,803	*385	1,365	..	..	53	..
	2019	1,937	*125	1,647	..	..	165	..
	2020	*1,882	*68	*1,647	..	..	168	..
Mali	2017	3,096	*1,935	1,130	..	..	31	..
	2018	*3,290	*1,992	*1,267	..	..	31	..
	2019	3,535	*2,137	1,365	..	..	33	..
	2020	3,728	*2,191	1,444	..	..	93	..
Mauritania	2017	1,183	1,022	..	..	104	57	..
	2018	1,271	1,023	..	..	104	144	..
	2019	1,347	1,099	..	..	*104	*144	..
	2020	*1,434	*1,163	..	..	131	140	..
Mauritius	2017	3,120	2,976	90	..	15	39	..
	2018	3,131	2,943	125	..	15	49	..
	2019	3,237	2,994	99	..	15	128	..
	2020	2,882	2,603	116	..	18	146	..
Morocco	2017	33,192	26,875	1,565	..	3,035	415	1,302
	2018	35,822	27,708	1,998	..	3,863	950	1,302
	2019	41,650	32,390	1,654	..	4,723	1,581	1,302
	2020	40,057	31,353	1,290	..	4,592	1,520	1,302
Mozambique	2017	17,452	3,393	14,058	..	..	2	..
	2018	16,988	3,088	13,899	..	..	1	..
	2019	18,824	3,864	14,930	..	..	31	..
	2020	18,886	3,113	15,703	..	..	70	..
Namibia	2017	1,773	66	1,593	..	5	108	..
	2018	1,416	21	1,144	..	18	233	..
	2019	1,372	52	954	..	18	348	..
	2020	1,957	65	1,505	..	18	369	..
Niger	2017	566	552	..	..	..	15	..
	2018	480	447	..	..	..	33	..
	2019	626	593	..	..	..	33	..
	2020	656	610	..	..	..	*46	..
Nigeria	2017	32,218	24,443	7,744	..	3	28	..
	2018	33,380	25,657	7,692	..	3	28	..
	2019	33,107	24,633	8,430	..	3	41	..
	2020	32,432	24,701	7,686	..	*3	42	..
Rwanda	2017	700	349	334	..	..	17	..
	2018	759	403	338	..	..	18	..
	2019	798	393	387	..	..	18	..
	2020	838	326	494	..	..	18	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
..	..	..	..	502	*1	501	..	..
..	..	..	..	517	1	517	..	..
..	..	..	..	393	1	392	..	..
..	..	..	..	427	*1	426	..	..
*203	*200	..	*3	*275	*151	*124	..	..
*204	*200	..	*4	*201	*77	*124	..	..
*204	*200	..	*4	*214	*90	*124	..	..
*204	*200	..	*4	*242	*118	*124	..	..
..	..	..	..	33,282	33,274	..	..	8
..	..	..	..	34,171	34,164	..	..	8
..	..	..	..	34,629	34,621	..	..	8
..	..	..	..	29,499	29,491	..	..	8
260	260	..	..	1,723	917	783	..	23
*279	*279	..	..	1,820	829	968	..	*23
*285	*285	..	..	1,892	974	886	..	32
*298	*298	..	..	1,869	1,018	818	..	32
*54	*53	*1	..	1,863	*1	1,823	..	39
*385	*380	*5	..	1,418	*5	1,360	..	53
*125	*120	*5	..	1,812	*5	1,642	..	165
*68	*63	*5	..	*1,814	*5	*1,642	..	168
*1,014	*986	..	28	2,082	949	1,130	..	3
*1,070	*1,042	..	28	*2,220	*950	*1,267	..	*3
*1,124	*1,093	..	31	2,411	1,044	1,365	..	2
*1,133	*1,101	..	32	2,595	1,090	1,444	..	61
342	342	..	..	841	680	..	..	161
*346	*346	..	..	925	677	..	..	248
*350	*350	..	..	997	749	..	..	*248
*372	*372	..	..	*1,062	*791	..	..	271
1,826	1,775	..	51	1,293	1,201	90	..	3
1,758	1,697	..	62	1,373	1,246	125	..	3
1,755	1,614	..	141	1,482	1,381	99	..	3
1,682	1,521	..	161	1,200	1,082	116	..	3
1,388	..	..	1,388	31,804	26,875	1,565	..	3,364
1,389	..	..	1,389	34,432	27,708	1,998	..	4,726
1,567	176	..	1,391	40,083	32,214	1,654	..	6,216
1,660	283	..	1,378	38,396	31,070	1,290	..	6,036
58	58	..	..	17,394	3,335	14,058	..	2
61	61	..	..	16,927	3,027	13,899	..	1
65	65	..	..	18,759	3,799	14,930	..	31
*70	*70	..	..	18,816	3,043	15,703	..	70
..	..	..	..	1,773	66	1,593	..	113
..	..	..	..	1,416	21	1,144	..	251
..	..	..	..	1,372	52	954	..	366
..	..	..	..	1,957	65	1,505	..	387
25	10	..	15	541	541	..	..	..
43	*11	..	33	437	437	..	..	..
*91	*58	..	33	535	535	..	..	..
*108	*62	..	*46	548	548	..	..	..
5,530	5,341	158	31	26,688	19,102	7,586	..	..
5,795	5,607	157	31	27,586	20,051	7,535	..	..
5,599	5,383	172	44	27,508	19,250	8,258	..	..
5,599	5,398	157	45	26,833	19,303	7,530	..	..
*2	*2	..	..	698	347	334	..	17
*2	*2	..	..	757	401	338	..	18
*2	*2	..	..	796	391	387	..	18
*2	*2	..	..	836	324	494	..	18



Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Sao Tome and Principe	2017	109	104	5	..	..	0	..
	2018	*110	*103	6	..	..	0	..
	2019	110	103	6	..	..	0	..
	2020	*110	*103	*6	..	..	0	..
Senegal	2017	4,418	4,270	..	..	..	99	49
	2018	4,502	4,333	..	..	..	80	89
	2019	*4,453	*4,081	..	..	23	*291	58
	2020	5,804	5,159	..	..	217	*385	43
Seychelles	2017	513	503	..	..	7	3	..
	2018	518	507	..	..	7	4	..
	2019	540	531	..	..	5	4	..
	2020	535	523	..	..	6	6	..
Sierra Leone	2017	319	89	224	..	..	6	..
	2018	320	91	223	..	..	6	..
	2019	260	17	237	..	..	6	..
	2020	253	11	236	..	..	*6	..
Somalia	2017	367	350	..	..	6	11	..
	2018	367	350	..	..	6	11	..
	2019	367	350	..	..	6	11	..
	2020	370	340	..	..	6	24	..
South Africa	2017	257,769	227,635	5,323	15,743	5,132	3,936	..
	2018	256,064	228,082	5,694	11,580	6,467	4,241	..
	2019	252,639	222,163	5,791	13,252	6,624	4,809	..
	2020	239,520	212,410	6,239	9,903	5,937	5,031	..
South Sudan	2017	542	539	..	..	..	3	..
	2018	548	538	..	..	..	10	..
	2019	557	546	..	..	..	11	..
	2020	558	547	..	..	..	11	..
St. Helena and Depend.	2017	11	9	..	..	2	1	..
	2018	12	8	..	..	3	2	..
	2019	12	9	..	..	2	1	..
	2020	11	8	..	..	2	1	..
Sudan	2017	15,692	6,325	9,347	..	..	20	..
	2018	16,398	6,721	9,657	..	..	21	..
	2019	16,814	6,583	10,210	..	..	21	..
	2020	*16,758	*6,686	*10,051	..	..	*21	..
Togo	2017	804	595	207	..	..	3	..
	2018	588	389	196	..	..	3	..
	2019	718	476	236	..	..	6	..
	2020	699	547	144	..	..	8	..
Tunisia	2017	20,589	19,758	17	..	449	133	232
	2018	21,012	20,085	17	..	453	174	283
	2019	22,140	21,038	66	..	500	245	291
	2020	21,633	20,572	46	..	465	333	216
Uganda	2017	3,854	381	3,447	..	..	25	..
	2018	4,040	405	3,602	..	..	32	..
	2019	4,364	300	3,986	..	..	78	..
	2020	*4,445	246	*4,081	..	..	118	..
United Rep. of Tanzania	2017	7,258	4,869	2,350	..	..	39	..
	2018	7,403	4,915	*2,400	..	..	88	..
	2019	7,873	5,306	2,477	..	..	89	..
	2020	7,954	4,763	3,139	..	..	51	..
Zambia	2017	14,536	2,065	12,471	..	..	0	..
	2018	16,282	2,574	13,706	..	..	1	..
	2019	15,115	2,669	12,329	..	..	118	..
	2020	15,237	2,294	12,793	..	..	150	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
..	..	..	..	109	104	5	..	0
..	..	..	..	*110	*103	6	..	0
..	..	..	..	110	103	6	..	0
..	..	..	..	*110	*103	*6	..	0
969	821	..	148	3,449	3,449	..	..	..
1,134	965	..	169	3,368	3,368	..	..	..
1,026	869	..	*158	*3,427	*3,212	..	..	*214
805	631	..	*174	4,999	4,528	..	..	*472
*89	*89	..	..	424	414	..	..	10
*90	*90	..	..	428	417	..	..	11
*92	*92	..	..	448	439	..	..	9
*93	*93	..	..	442	430	..	..	12
4	4	..	..	315	85	224	..	6
4	4	..	..	316	87	223	..	6
4	4	..	..	256	13	237	..	6
*4	*4	..	..	249	7	236	..	*6
..	..	..	..	367	350	..	..	17
..	..	..	..	367	350	..	..	17
..	..	..	..	367	350	..	..	17
..	..	..	..	370	340	..	..	30
20,121	11,256	140	8,725	237,648	216,379	5,183	15,743	343
23,261	13,163	75	10,023	232,803	214,919	5,619	11,580	685
24,159	13,385	43	10,731	228,480	208,778	5,748	13,252	702
24,328	13,932	57	10,339	215,192	198,478	6,182	9,903	629
39	37	..	2	503	502	..	..	1
48	43	..	5	500	495	..	..	5
49	43	..	6	508	503	..	..	5
50	44	..	6	508	503	..	..	5
..	..	..	..	11	9	..	..	3
..	..	..	..	12	8	..	..	4
..	..	..	..	12	9	..	..	3
..	..	..	..	11	8	..	..	3
130	130	..	..	15,562	6,195	9,347	..	20
122	122	..	..	16,277	6,599	9,657	..	21
109	109	..	..	16,705	6,474	10,210	..	21
*107	*107	..	..	*16,651	*6,579	*10,051	..	*21
6	4	..	3	798	591	207	..	..
7	4	..	3	581	385	196	..	..
12	7	..	5	706	469	236	..	0
10	4	..	7	688	543	144	..	1
1,187	822	..	365	19,402	18,936	17	..	449
1,467	1,010	..	457	19,545	19,075	17	..	453
1,591	1,055	..	536	20,549	19,983	66	..	500
1,594	1,045	..	549	20,039	19,527	46	..	465
414	150	264	..	3,440	231	3,183	..	25
651	207	444	..	3,389	199	3,158	..	32
677	197	480	..	3,687	103	3,506	..	78
*680	188	*491	..	*3,765	58	*3,590	..	118
47	8	..	39	7,211	4,861	2,350	..	..
95	7	..	88	7,308	4,908	*2,400	..	..
98	8	..	89	7,776	5,298	2,477	..	..
59	8	..	51	7,894	4,755	3,139	..	..
78	78	..	..	14,458	1,987	12,471	..	0
78	78	..	..	16,203	2,496	13,706	..	1
78	78	..	..	15,037	2,591	12,329	..	118
78	78	..	..	15,159	2,216	12,793	..	150

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						Other
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	
Zimbabwe	2017	7,544	3,575	3,969	..	..	..	..
	2018	9,418	4,369	5,049	..	..	..	..
	2019	8,451	4,285	4,166	..	..	..	..
	2020	6,712	2,882	3,805	..	..	24	..
<b>Asia</b>	<b>2017</b>	<b>13,082,812</b>	<b>10,075,825</b>	<b>1,817,460</b>	<b>507,231</b>	<b>370,068</b>	<b>209,207</b>	<b>103,022</b>
	<b>2018</b>	<b>13,772,209</b>	<b>10,493,012</b>	<b>1,859,815</b>	<b>577,664</b>	<b>470,082</b>	<b>314,303</b>	<b>57,333</b>
	<b>2019</b>	<b>14,212,142</b>	<b>10,598,066</b>	<b>1,981,264</b>	<b>654,036</b>	<b>521,688</b>	<b>397,456</b>	<b>59,632</b>
	<b>2020</b>	<b>14,431,976</b>	<b>10,634,619</b>	<b>2,017,186</b>	<b>659,696</b>	<b>585,658</b>	<b>473,688</b>	<b>61,130</b>
Afghanistan	2017	1,420	176	1,244	..	..	..	..
	2018	1,266	200	1,066	..	..	..	..
	2019	1,592	183	1,388	..	..	21	..
	2020	1,337	124	1,181	..	..	32	..
Armenia	2017	7,765	2,872	2,269	2,620	2	3	..
	2018	7,791	3,376	2,318	2,076	2	19	..
	2019	7,680	3,047	2,371	2,198	3	61	..
	2020	7,839	3,166	1,778	2,756	2	137	..
Azerbaijan	2017	24,321	22,515	1,746	..	22	37	..
	2018	25,229	23,339	1,768	..	83	39	..
	2019	26,073	24,359	1,565	..	105	44	..
	2020	25,839	24,627	1,070	..	96	47	..
Bahrain	2017	29,193	29,183	..	..	*1	*9	..
	2018	29,516	29,506	..	..	*1	*9	..
	2019	33,453	33,442	..	..	*1	*10	..
	2020	33,374	33,363	..	..	*1	*10	..
Bangladesh	2017	73,249	71,934	1,041	..	6	268	..
	2018	78,612	77,229	1,086	..	6	291	..
	2019	84,828	83,707	769	..	6	347	..
	2020	84,759	83,474	878	..	6	401	..
Bhutan	2017	7,730	0	7,728	..	1	0	..
	2018	6,960	0	6,959	..	1	0	..
	2019	8,858	0	8,857	..	*1	0	..
	2020	11,371	0	11,370	..	1	0	..
Brunei Darussalam	2017	4,157	4,155	..	..	..	2	..
	2018	4,294	4,292	..	..	..	2	..
	2019	4,933	4,931	..	..	..	2	..
	2020	5,736	5,734	..	..	..	2	..
Cambodia	2017	6,902	4,105	2,792	..	..	5	..
	2018	8,530	3,542	4,971	..	..	17	..
	2019	9,018	4,680	4,239	..	..	98	..
	2020	8,982	4,604	4,073	..	..	306	..
China	2017	6,604,476	4,754,595	1,197,865	248,100	297,230	106,338	348
	2018	7,166,133	5,096,318	1,231,787	294,359	365,971	177,517	181
	2019	7,503,458	5,220,150	1,304,440	348,350	406,030	224,460	28
	2020	7,779,060	5,330,250	1,355,210	366,250	466,470	260,857	23
China, Hong Kong SAR	2017	36,970	36,970	..	..	..	..	..
	2018	36,565	36,565	..	..	..	..	..
	2019	36,911	36,911	..	..	..	..	..
	2020	35,189	35,189	..	..	..	..	..
China, Macao SAR	2017	1,465	1,465	..	..	..	..	..
	2018	653	653	..	..	..	..	..
	2019	830	830	..	..	..	..	..
	2020	562	562	..	..	..	..	..
Cyprus	2017	5,004	4,621	..	..	211	172	..
	2018	5,061	4,640	..	..	221	199	..
	2019	5,141	4,685	..	..	239	218	..
	2020	4,849	4,313	..	..	240	296	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
167	167	..	..	7,377	3,408	3,969	..	..
206	206	..	..	9,212	4,163	5,049	..	..
209	209	..	..	8,242	4,076	4,166	..	..
109	109	..	..	6,603	2,773	3,805	..	24
<b>1,197,458</b>	<b>1,093,024</b>	<b>12,428</b>	<b>92,006</b>	<b>11,885,354</b>	<b>8,982,801</b>	<b>1,805,032</b>	<b>507,231</b>	<b>590,291</b>
<b>1,248,249</b>	<b>1,148,409</b>	<b>10,121</b>	<b>89,719</b>	<b>12,523,960</b>	<b>9,344,602</b>	<b>1,849,694</b>	<b>577,664</b>	<b>752,000</b>
<b>1,309,069</b>	<b>1,197,475</b>	<b>9,986</b>	<b>101,608</b>	<b>12,903,073</b>	<b>9,400,591</b>	<b>1,971,278</b>	<b>654,036</b>	<b>877,169</b>
<b>1,213,682</b>	<b>1,098,290</b>	<b>9,171</b>	<b>106,221</b>	<b>13,218,295</b>	<b>9,536,329</b>	<b>2,008,016</b>	<b>659,696</b>	<b>1,014,254</b>
*322	*8	*314	..	1,098	168	930	..	..
*287	*7	*280	..	979	193	786	..	..
*306	*6	*300	..	1,286	177	1,088	..	21
*306	*6	*300	..	1,031	118	881	..	32
2	..	..	2	7,763	2,872	2,269	2,620	2
14	..	..	14	7,777	3,376	2,318	2,076	7
47	..	..	47	7,632	3,047	2,371	2,198	17
115	..	..	115	7,723	3,166	1,778	2,756	23
2,089	2,070	..	20	22,232	20,445	1,746	..	40
2,096	2,096	..	0	23,133	21,243	1,768	..	122
2,069	2,069	..	0	24,004	22,290	1,565	..	150
2,158	2,155	3	0	23,681	22,471	1,067	..	143
11,244	11,244	..	..	17,949	17,939	..	..	*10
11,683	11,683	..	..	17,833	17,823	..	..	*10
15,236	15,236	..	..	18,217	18,206	..	..	*11
15,427	15,427	..	..	17,947	17,936	..	..	*11
17,237	17,237	..	..	56,012	54,697	1,041	..	274
17,244	17,244	..	..	61,368	59,985	1,086	..	297
17,161	17,161	..	..	67,667	66,546	769	..	353
16,558	16,558	..	..	68,201	66,916	878	..	407
..	..	..	..	7,730	0	7,728	..	1
..	..	..	..	6,960	0	6,959	..	2
..	..	..	..	8,858	0	8,857	..	*2
..	..	..	..	11,371	0	11,370	..	1
433	433	..	..	3,724	3,722	..	..	2
440	440	..	..	3,853	3,852	..	..	2
912	912	..	..	4,021	4,019	..	..	2
1,662	1,662	..	..	4,074	4,073	..	..	2
..	..	..	..	6,902	4,105	2,792	..	5
..	..	..	..	8,530	3,542	4,971	..	17
..	..	..	..	9,018	4,680	4,239	..	98
..	..	..	..	8,982	4,604	4,073	..	306
385,598	385,598	..	..	6,218,878	4,368,997	1,197,865	248,100	403,916
413,311	413,311	..	..	6,752,822	4,683,007	1,231,787	294,359	543,669
423,354	423,354	..	..	7,080,104	4,796,796	1,304,440	348,350	630,518
432,283	432,283	..	..	7,346,777	4,897,967	1,355,210	366,250	727,350
..	..	..	..	36,970	36,970	..	..	..
..	..	..	..	36,565	36,565	..	..	..
..	..	..	..	36,911	36,911	..	..	..
..	..	..	..	35,189	35,189	..	..	..
205	205	..	..	1,260	1,260	..	..	..
179	179	..	..	474	474	..	..	..
217	217	..	..	613	613	..	..	..
189	189	..	..	373	373	..	..	..
108	47	..	61	4,896	4,574	..	..	322
122	51	..	71	4,938	4,589	..	..	349
138	51	..	87	5,003	4,633	..	..	370
150	52	..	98	4,699	4,261	..	..	438

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Georgia	2017	11,531	2,233	9,210	..	88	..	..
	2018	12,149	2,115	9,949	..	84	..	..
	2019	11,857	2,840	8,932	..	85	..	..
	2020	11,160	2,821	8,248	..	91	..	..
India	2017	1,490,257	1,217,575	126,235	38,346	38,486	24,613	*45,002
	2018	1,521,958	1,244,959	135,164	37,813	*64,294	*39,728	..
	2019	1,576,740	1,253,707	156,049	46,472	*69,949	*50,563	..
	2020	*1,533,307	*1,200,660	*160,909	*43,029	*67,418	*61,291	..
Indonesia	2017	262,673	230,068	18,632	..	*6	29	13,938
	2018	275,657	242,665	19,774	..	..	7	13,212
	2019	280,562	247,723	19,749	..	..	10	13,080
	2020	274,780	240,582	19,900	..	..	9	14,289
Iran (Islamic Rep. of)	2017	307,992	285,012	15,051	7,514	306	85	24
	2018	309,351	285,278	15,765	7,450	518	340	..
	2019	321,570	298,856	15,873	5,870	560	410	..
	2020	324,845	302,092	15,887	5,790	566	510	..
Iraq	2017	83,947	81,714	2,176	..	..	57	..
	2018	82,507	80,312	1,818	..	..	377	..
	2019	88,867	83,846	4,963	..	..	57	..
	2020	91,423	86,449	4,916	..	..	57	..
Israel	2017	67,674	65,742	0	..	180	1,511	242
	2018	68,894	66,978	0	..	183	1,574	159
	2019	72,351	68,796	..	..	190	3,115	250
	2020	72,285	67,702	..	..	204	4,163	216
Japan	2017	1,080,902	872,192	91,104	32,912	6,490	55,069	23,136
	2018	1,068,385	823,386	88,348	64,929	7,481	62,668	21,573
	2019	1,040,627	790,504	87,653	63,779	7,617	69,382	21,692
	2020	1,017,778	783,522	87,548	38,752	8,970	79,087	19,900
Jordan	2017	20,793	19,387	38	..	449	920	..
	2018	20,476	18,332	23	..	707	1,415	..
	2019	20,995	18,016	18	..	875	2,086	..
	2020	20,952	16,675	18	..	1,407	2,852	..
Kazakhstan	2017	103,197	91,487	11,210	..	340	160	..
	2018	107,605	96,364	10,395	..	461	384	..
	2019	106,878	95,346	9,994	..	707	831	..
	2020	110,890	98,711	9,660	..	1,029	1,490	..
Korea, Dem.Ppl's.Rep.	2017	14,451	2,537	11,900	..	..	14	..
	2018	15,044	2,229	12,800	..	..	15	..
	2019	13,580	2,563	11,000	..	..	16	..
	2020	15,210	2,394	12,800	..	..	16	..
Korea, Republic of	2017	566,893	400,161	7,006	148,427	2,169	7,056	2,074
	2018	590,129	435,310	7,270	133,505	2,465	9,208	2,370
	2019	581,492	410,786	6,249	145,910	2,681	12,996	2,870
	2020	578,595	386,067	7,148	160,184	3,151	17,967	4,077
Kuwait	2017	72,826	72,788	..	..	25	13	..
	2018	74,161	74,103	..	..	38	20	..
	2019	75,082	74,950	..	..	36	96	..
	2020	74,757	74,544	..	..	33	180	..
Kyrgyzstan	2017	15,514	1,311	14,203	..	..	..	..
	2018	15,728	1,410	14,318	..	..	..	..
	2019	15,100	1,256	13,844	..	..	..	..
	2020	15,404	1,425	13,979	..	..	..	..
Lao People's Dem. Rep.	2017	33,227	12,441	20,777	..	..	9	..
	2018	36,762	13,703	22,999	..	..	60	..
	2019	31,133	12,194	18,899	..	..	40	..
	2020	*39,967	*13,665	*26,262	..	..	*41	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
..	..	..	..	11,531	2,233	9,210	..	88
..	..	..	..	12,149	2,115	9,949	..	84
..	..	..	..	11,857	2,840	8,932	..	85
..	..	..	..	11,160	2,821	8,248	..	91
184,303	180,391	112	*3,800	1,305,954	1,037,184	126,123	38,346	104,301
175,633	172,645	270	*2,718	1,346,325	1,072,314	134,894	37,813	*101,304
217,942	210,869	280	*6,793	1,358,798	1,042,838	155,769	46,472	*113,719
*182,041	*173,533	*351	*8,157	*1,351,266	*1,027,127	*160,558	*43,029	*120,552
57,258	42,353	6,207	8,697	205,415	187,715	12,425	..	5,276
47,059	47,059	..	..	228,599	195,606	19,774	..	13,218
44,113	44,113	..	..	236,449	203,610	19,749	..	13,089
36,735	36,735	..	..	238,046	203,848	19,900	..	14,298
7,905	7,905	..	..	300,087	277,107	15,051	7,514	415
4,967	4,967	..	..	304,384	280,311	15,765	7,450	858
4,933	4,933	..	..	316,637	293,923	15,873	5,870	970
5,020	5,020	..	..	319,825	297,072	15,887	5,790	1,076
57	..	..	57	83,890	81,714	2,176	..	..
377	..	..	377	82,130	80,312	1,818	..	..
57	..	..	57	88,810	83,846	4,963	..	..
57	..	..	57	91,366	86,449	4,916	..	..
4,265	2,333	0	1,933	63,409	63,409	0	..	0
5,047	3,131	0	1,916	63,847	63,847	0	..	0
6,845	3,796	..	3,049	65,506	65,000	..	..	505
8,072	4,128	..	3,945	64,212	63,574	..	..	638
151,118	80,612	2,747	67,759	929,784	791,580	88,356	32,912	16,936
161,872	86,241	3,290	72,341	906,514	737,145	85,058	64,929	19,382
162,328	82,467	3,328	76,533	878,298	708,036	84,325	63,779	22,158
159,915	75,463	2,999	81,453	857,863	708,059	84,549	38,752	26,504
1,233	1,233	..	..	19,560	18,154	38	..	1,369
1,178	1,178	..	..	19,298	17,154	23	..	2,122
1,222	1,222	..	..	19,773	16,794	18	..	2,961
907	907	..	..	20,045	15,768	18	..	4,259
3,028	2,961	..	67	100,169	88,526	11,210	..	433
3,151	2,908	..	243	104,453	93,456	10,395	..	602
1,148	708	..	440	105,730	94,638	9,994	..	1,098
2,261	2,008	..	253	108,629	96,703	9,660	..	2,266
..	..	..	..	14,451	2,537	11,900	..	14
..	..	..	..	15,044	2,229	12,800	..	15
..	..	..	..	13,580	2,563	11,000	..	16
..	..	..	..	15,210	2,394	12,800	..	16
33,652	32,688	..	964	533,241	367,474	7,006	148,427	10,335
35,726	34,603	..	1,123	554,403	400,707	7,270	133,505	12,921
31,840	30,495	..	1,345	549,652	380,291	6,249	145,910	17,202
30,615	29,107	..	1,507	547,980	356,960	7,148	160,184	23,688
..	..	..	..	72,826	72,788	..	..	38
..	..	..	..	74,161	74,103	..	..	58
..	..	..	..	75,082	74,950	..	..	132
..	..	..	..	74,757	74,544	..	..	213
15	15	..	..	15,499	1,296	14,203	..	..
39	39	..	..	15,689	1,371	14,318	..	..
32	32	..	..	15,068	1,224	13,844	..	..
26	26	..	..	15,378	1,399	13,979	..	..
..	..	..	..	33,227	12,441	20,777	..	9
..	..	..	..	36,762	13,703	22,999	..	60
..	..	..	..	31,133	12,194	18,899	..	40
..	..	..	..	*39,967	*13,665	*26,262	..	*41

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Lebanon	2017	23,411	22,955	415	..	..	41	..
	2018	23,150	22,754	348	..	..	48	..
	2019	23,819	22,736	965	..	..	118	..
	2020	18,344	17,200	1,025	..	..	*120	..
Malaysia	2017	164,509	137,599	26,580	..	..	330	..
	2018	170,578	143,621	26,325	..	..	632	..
	2019	175,778	148,168	26,666	..	..	*943	..
	2020	182,658	154,011	26,217	..	..	2,430	..
Maldives	2017	725	709	..	..	2	14	..
	2018	772	756	..	..	2	14	..
	2019	804	780	..	..	3	21	..
	2020	807	783	..	..	*3	*21	..
Mongolia	2017	6,027	5,759	86	..	155	27	..
	2018	6,535	6,055	81	..	340	59	..
	2019	6,900	6,416	*85	..	*340	*59	..
	2020	6,970	6,486	85	..	340	59	..
Myanmar	2017	20,055	8,864	11,191	..	..	..	..
	2018	22,883	11,641	11,228	..	..	14	..
	2019	23,778	14,328	9,369	..	..	81	..
	2020	23,643	15,194	8,370	..	..	79	..
Nepal	2017	4,639	0	4,632	..	6	1	..
	2018	4,902	0	4,895	..	6	1	..
	2019	6,181	0	6,173	..	7	1	..
	2020	6,223	0	6,215	..	7	1	..
Oman	2017	36,130	36,114	..	..	..	16	..
	2018	37,718	37,702	..	..	..	16	..
	2019	38,337	38,320	..	..	..	17	..
	2020	38,173	38,045	..	..	..	128	..
Other Asia	2017	270,281	235,640	8,780	22,446	1,722	1,692	..
	2018	275,577	235,595	7,852	27,682	1,707	2,740	0
	2019	274,191	227,207	8,753	32,323	1,892	4,014	1
	2020	280,127	233,991	6,178	31,440	2,421	6,095	2
Pakistan	2017	123,533	81,447	32,132	6,867	1,422	654	1,011
	2018	134,982	93,546	27,729	9,849	2,124	714	1,020
	2019	136,461	89,621	32,789	9,134	3,234	716	967
	2020	130,458	80,734	33,991	11,495	2,882	795	561
Philippines	2017	95,747	73,554	9,628	..	1,094	1,201	10,270
	2018	101,223	78,985	9,401	..	1,153	1,249	10,435
	2019	107,517	86,496	8,043	..	1,042	1,246	10,691
	2020	103,215	82,851	7,209	..	1,026	1,373	10,757
Qatar	2017	45,555	45,555	..	..	..	..	..
	2018	47,913	47,913	..	..	..	..	..
	2019	49,873	49,873	..	..	..	..	..
	2020	49,259	49,259	..	..	..	..	..
Saudi Arabia	2017	353,666	353,596	..	..	5	65	..
	2018	343,800	343,581	..	..	5	214	..
	2019	343,313	342,478	..	..	6	829	..
	2020	339,119	338,283	..	..	*6	*830	..
Singapore	2017	52,401	52,226	..	..	..	175	..
	2018	53,142	52,905	..	..	..	237	..
	2019	54,552	54,142	..	..	..	410	..
	2020	53,702	53,080	..	..	..	622	..
Sri Lanka	2017	15,004	10,381	4,039	..	367	217	..
	2018	15,985	9,072	6,401	..	326	186	..
	2019	16,630	11,102	4,812	..	350	366	..
	2020	15,801	10,260	4,976	..	344	221	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
8,913	8,872	..	41	14,498	14,083	415	..	..
7,916	7,868	..	48	15,234	14,886	348	..	..
9,117	8,999	..	118	14,702	13,737	965	..	..
*5,980	*5,860	..	*120	12,364	11,340	1,025	..	..
5,252	5,247	5	0	159,257	132,352	26,575	..	330
7,163	7,104	0	59	163,415	136,517	26,325	..	573
7,584	7,498	..	*86	168,194	140,670	26,666	..	*857
6,613	6,521	..	*92	176,046	147,491	26,217	..	2,338
*260	*260	..	..	465	449	..	..	16
*280	*280	..	..	492	476	..	..	16
*300	*300	..	..	504	480	..	..	24
*300	*300	..	..	507	483	..	..	*24
86	..	86	..	5,941	5,759	..	..	182
81	..	81	..	6,454	6,055	..	..	399
*85	..	*85	..	6,815	6,416	..	..	*399
85	..	85	..	6,885	6,486	..	..	399
6,499	5,749	750	..	13,557	3,116	10,441	..	..
12,396	8,779	3,602	14	10,487	2,862	7,625	..	..
14,415	10,929	3,405	81	9,363	3,399	5,964	..	..
16,421	13,243	3,099	79	7,222	1,951	5,271	..	..
156	..	156	..	4,483	0	4,476	..	7
157	..	157	..	4,745	0	4,738	..	6
161	..	161	..	6,019	0	6,012	..	7
164	..	164	..	6,059	0	6,052	..	8
..	..	..	..	36,130	36,114	..	..	16
..	..	..	..	37,718	37,702	..	..	16
..	..	..	..	38,337	38,320	..	..	17
..	..	..	..	38,173	38,045	..	..	128
36,034	34,433	..	1,601	234,246	201,207	8,780	22,446	1,813
41,765	39,108	..	2,657	233,811	196,487	7,852	27,682	1,789
42,095	38,332	..	3,763	232,096	188,875	8,753	32,323	2,144
42,481	37,190	..	5,291	237,646	196,801	6,178	31,440	3,227
2,726	1,715	..	1,011	120,807	79,732	32,132	6,867	2,076
2,983	1,963	..	1,020	131,999	91,583	27,729	9,849	2,838
2,980	2,013	..	967	133,481	87,608	32,789	9,134	3,950
*2,577	*2,016	..	561	127,881	78,718	33,991	11,495	3,677
*1,376	*1,359	*17	..	94,371	72,195	9,611	..	12,565
*1,458	*1,441	*17	..	99,765	77,544	9,384	..	12,837
*1,475	*1,458	*17	..	106,042	85,038	8,026	..	12,979
*1,460	*1,443	*17	..	101,756	81,408	7,192	..	13,156
42,813	42,813	..	..	2,742	2,742	..	..	..
46,380	46,380	..	..	1,533	1,533	..	..	..
47,942	47,942	..	..	1,930	1,930	..	..	..
46,500	46,500	..	..	2,759	2,759	..	..	..
146,658	146,658	..	..	207,008	206,938	..	..	70
151,161	151,161	..	..	192,639	192,420	..	..	219
149,601	149,601	..	..	193,712	192,877	..	..	835
*154,936	*154,936	..	..	184,183	183,347	..	..	*836
3,990	3,990	..	..	48,410	48,235	..	..	175
4,733	4,733	..	..	48,409	48,172	..	..	237
4,497	4,497	..	..	50,055	49,645	..	..	410
4,661	4,661	..	..	49,041	48,419	..	..	622
1,184	86	964	134	13,821	10,296	3,075	..	450
1,409	87	1,232	89	14,577	8,985	5,169	..	423
1,233	118	1,011	105	15,396	10,984	3,801	..	611
1,269	*118	1,047	*105	14,532	10,142	3,929	..	460



Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
State of Palestine	2017	546	501	..	..	..	45	..
	2018	420	360	..	..	..	60	..
	2019	811	691	..	..	..	120	..
	2020	840	662	..	..	..	178	..
Syrian Arab Republic	2017	18,288	17,534	754	..	..	..	..
	2018	18,286	17,532	754	..	..	..	..
	2019	17,648	16,894	754	..	..	..	..
	2020	16,365	15,611	754	..	..	..	..
Tajikistan	2017	18,144	1,011	17,133	..	..	..	..
	2018	19,743	1,348	18,395	..	..	..	..
	2019	20,957	1,788	19,169	..	..	..	..
	2020	20,101	1,987	18,114	..	..	..	..
Thailand	2017	181,940	171,453	4,833	..	1,110	4,543	2
	2018	182,288	168,326	7,783	..	1,641	4,537	1
	2019	190,681	175,418	6,446	..	3,670	5,146	1
	2020	188,870	176,452	4,656	..	3,124	4,636	1
Timor-Leste	2017	430	427	2	..	..	1	..
	2018	453	450	2	..	..	1	..
	2019	518	515	2	..	..	*1	..
	2020	505	503	2	..	..	1	..
Türkiye	2017	297,278	211,290	58,218	..	17,904	2,889	6,976
	2018	304,802	208,733	59,938	..	19,949	7,800	8,381
	2019	303,898	174,041	88,823	..	21,731	9,250	10,053
	2020	306,703	181,526	78,094	..	24,828	10,950	11,304
Turkmenistan	2017	22,534	22,531	3	..	..	..	..
	2018	22,534	22,531	3	..	..	..	..
	2019	22,534	22,531	3	..	..	..	..
	2020	22,534	22,531	3	..	..	..	..
United Arab Emirates	2017	*134,569	*133,835	..	..	..	734	..
	2018	*136,014	*134,711	..	..	..	1,303	..
	2019	*138,454	*134,674	..	..	..	3,780	..
	2020	*137,310	*131,835	..	..	..	5,475	..
Uzbekistan	2017	60,323	52,393	7,930	..	..	1	..
	2018	62,408	56,510	5,897	..	..	0	..
	2019	63,021	56,544	6,462	..	16	0	..
	2020	66,516	61,502	4,999	..	16	0	..
Viet Nam	2017	198,499	109,354	88,875	..	270	..	..
	2018	213,199	128,576	84,205	..	312	106	..
	2019	*232,602	*142,200	85,097	..	312	4,993	..
	2020	240,543	156,672	73,461	..	976	9,434	..
Yemen	2017	4,050	3,856	..	..	..	194	..
	2018	3,487	3,003	..	..	..	484	..
	2019	3,277	2,792	..	..	..	484	..
	2020	2,939	2,449	..	..	..	490	..
<b>Europe</b>	<b>2017</b>	<b>4,884,692</b>	<b>2,493,226</b>	<b>744,388</b>	<b>1,138,815</b>	<b>366,277</b>	<b>122,369</b>	<b>19,617</b>
	<b>2018</b>	<b>4,903,522</b>	<b>2,424,485</b>	<b>805,610</b>	<b>1,141,487</b>	<b>383,429</b>	<b>129,529</b>	<b>18,982</b>
	<b>2019</b>	<b>4,848,725</b>	<b>2,342,582</b>	<b>763,672</b>	<b>1,139,926</b>	<b>440,687</b>	<b>142,861</b>	<b>18,997</b>
	<b>2020</b>	<b>4,690,690</b>	<b>2,142,209</b>	<b>823,761</b>	<b>1,050,101</b>	<b>487,839</b>	<b>168,052</b>	<b>18,728</b>
Albania	2017	4,526	..	4,526	..	..	..	..
	2018	8,552	..	8,552	..	..	..	..
	2019	5,206	..	5,184	..	..	22	..
	2020	5,313	..	5,281	..	..	32	..
Andorra	2017	103	17	85	..	..	1	..
	2018	135	20	114	..	..	1	..
	2019	107	21	85	..	..	2	..
	2020	132	17	113	..	..	*2	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
154	132	..	23	392	369	..	..	23
137	107	..	30	284	254	..	..	30
160	100	..	60	651	591	..	..	60
163	74	..	89	677	588	..	..	89
593	593	..	..	17,695	16,941	754	..	..
748	748	..	..	17,538	16,784	754	..	..
642	642	..	..	17,006	16,252	754	..	..
586	586	..	..	15,779	15,025	754	..	..
..	..	..	..	18,144	1,011	17,133	..	..
..	..	..	..	19,743	1,348	18,395	..	..
..	..	..	..	20,957	1,788	19,169	..	..
..	..	..	..	20,101	1,987	18,114	..	..
55,688	51,659	22	4,006	126,251	119,793	4,811	..	1,648
64,128	60,089	38	4,001	118,161	108,237	7,745	..	2,178
68,932	64,358	35	4,538	121,749	111,059	6,411	..	4,279
..	..	..	..	188,870	176,452	4,656	..	7,761
..	..	..	..	430	427	2	..	1
..	..	..	..	453	450	2	..	1
..	..	..	..	518	515	2	..	*1
..	..	..	..	505	503	2	..	1
20,284	17,682	967	1,636	276,993	193,609	57,252	..	26,133
19,918	16,334	1,073	2,510	284,884	192,399	58,865	..	33,620
22,934	18,598	1,282	3,053	280,964	155,443	87,540	..	37,980
25,677	20,842	1,026	3,808	281,027	160,684	77,068	..	43,274
..	..	..	..	22,534	22,531	3	..	..
..	..	..	..	22,534	22,531	3	..	..
..	..	..	..	22,534	22,531	3	..	..
..	..	..	..	22,534	22,531	3	..	..
..	..	..	..	*134,569	*133,835	..	..	734
..	..	..	..	*136,014	*134,711	..	..	1,303
..	..	..	..	*138,454	*134,674	..	..	3,780
..	..	..	..	*137,310	*131,835	..	..	5,475
..	..	..	..	60,323	52,393	7,930	..	1
..	..	..	..	62,408	56,510	5,897	..	0
..	..	..	..	63,021	56,544	6,462	..	16
..	..	..	..	66,516	61,502	4,999	..	16
4,282	4,200	*80	*2	194,217	105,154	88,795	..	268
*4,282	*4,200	*80	*2	208,917	124,376	84,125	..	416
*4,282	*4,200	*80	*2	*228,320	*138,000	85,017	..	5,303
8,596	8,514	*80	*2	231,947	148,158	73,381	..	10,408
437	243	..	194	3,613	3,613	..	..	..
729	245	..	484	2,758	2,758	..	..	..
733	248	..	484	2,544	2,544	..	..	..
717	227	..	490	2,222	2,222	..	..	..
<b>388,463</b>	<b>343,306</b>	<b>9,886</b>	<b>35,272</b>	<b>4,496,229</b>	<b>2,149,921</b>	<b>734,503</b>	<b>1,138,815</b>	<b>472,991</b>
<b>407,309</b>	<b>357,481</b>	<b>10,293</b>	<b>39,535</b>	<b>4,496,213</b>	<b>2,067,005</b>	<b>795,317</b>	<b>1,141,487</b>	<b>492,405</b>
<b>419,534</b>	<b>366,708</b>	<b>10,316</b>	<b>42,510</b>	<b>4,429,191</b>	<b>1,975,874</b>	<b>753,356</b>	<b>1,139,926</b>	<b>560,035</b>
<b>418,354</b>	<b>357,010</b>	<b>10,866</b>	<b>50,479</b>	<b>4,272,336</b>	<b>1,785,199</b>	<b>812,896</b>	<b>1,050,101</b>	<b>624,141</b>
..	..	..	..	4,526	..	4,526	..	..
..	..	..	..	8,552	..	8,552	..	..
..	..	..	..	5,206	..	5,184	..	22
..	..	..	..	5,313	..	5,281	..	32
..	..	..	..	103	17	85	..	1
..	..	..	..	135	20	114	..	1
..	..	..	..	107	21	85	..	2
..	..	..	..	132	17	113	..	*2

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Austria	2017	71,324	21,296	42,175	..	6,572	1,269	13
	2018	68,618	19,900	41,219	..	6,030	1,455	13
	2019	74,234	20,865	44,204	..	7,450	1,702	13
	2020	72,566	18,368	45,354	..	6,792	2,043	10
Belarus	2017	34,515	33,924	405	..	97	89	..
	2018	38,986	38,386	324	..	99	177	..
	2019	40,465	39,756	350	..	178	181	..
	2020	38,548	37,441	399	338	194	176	..
Belgium	2017	86,616	32,615	1,397	42,227	6,518	3,308	551
	2018	75,037	33,171	1,308	28,597	7,571	3,903	487
	2019	93,640	34,497	1,181	43,524	9,750	4,252	436
	2020	89,389	35,273	1,315	34,435	12,764	5,105	498
Bosnia and Herzegovina	2017	16,439	12,431	3,987	..	..	21	..
	2018	19,160	12,517	6,519	..	103	21	..
	2019	17,493	11,037	6,172	..	254	30	..
	2020	16,874	11,904	4,663	..	262	45	..
Bulgaria	2017	45,613	23,633	3,493	15,545	1,504	1,403	34
	2018	46,838	22,606	5,423	16,125	1,318	1,343	22
	2019	44,302	21,573	3,383	16,555	1,317	1,442	31
	2020	40,767	17,827	3,320	16,626	1,477	1,481	36
Croatia	2017	11,984	5,193	5,508	..	1,204	79	..
	2018	13,632	4,435	7,785	..	1,335	75	2
	2019	12,760	5,185	5,933	..	1,467	83	92
	2020	13,385	5,665	5,810	..	1,721	96	94
Czechia	2017	87,050	52,783	3,040	28,340	591	2,193	103
	2018	88,032	52,338	2,679	29,921	609	2,359	125
	2019	87,031	50,474	3,175	30,246	700	2,312	124
	2020	81,517	44,933	3,437	30,043	699	2,287	118
Denmark	2017	31,023	15,473	18	..	14,780	751	..
	2018	30,370	15,500	15	..	13,902	953	..
	2019	29,523	12,393	17	..	16,150	963	..
	2020	28,733	11,205	17	..	16,330	1,181	..
Estonia	2017	13,160	12,397	26	..	723	14	..
	2018	12,364	11,682	15	..	636	31	..
	2019	7,616	6,836	19	..	687	74	..
	2020	5,956	4,959	30	..	844	123	..
Faeroe Islands	2017	334	163	111	..	60	..	..
	2018	352	180	108	..	64	..	..
	2019	386	230	104	..	53	..	..
	2020	407	249	109	..	47	2	..
Finland	2017	67,524	25,031	14,772	22,477	4,795	49	401
	2018	70,263	27,959	13,301	22,793	5,839	90	281
	2019	68,650	25,923	12,421	23,870	6,025	147	264
	2020	68,950	21,392	15,883	23,291	7,938	218	227
France	2017	561,977	72,878	55,135	398,359	24,609	9,586	1,409
	2018	581,785	57,647	70,472	412,942	28,599	10,891	1,235
	2019	570,913	62,148	61,573	399,012	34,787	12,227	1,166
	2020	531,762	57,031	66,532	353,833	39,792	13,398	1,176
Germany	2017	653,723	404,286	26,155	76,324	105,693	39,401	1,864
	2018	640,468	385,445	23,863	76,005	109,951	43,459	1,745
	2019	606,917	334,214	25,671	75,071	125,894	44,383	1,684
	2020	572,666	300,857	24,876	64,382	132,102	48,641	1,808
Gibraltar	2017	214	213	..	..	..	..	0
	2018	215	215	..	..	..	..	0
	2019	220	220	..	..	..	..	0
	2020	215	215	..	..	..	..	0

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
8,211	7,720	478	13	63,114	13,576	41,697	..	7,841
7,987	7,500	474	13	60,631	12,400	40,745	..	7,486
7,966	7,419	535	13	66,268	13,446	43,669	..	9,152
7,837	7,371	456	10	64,729	10,997	44,898	..	8,835
3,735	3,717	9	9	30,780	30,207	396	..	177
3,960	3,876	8	76	35,026	34,510	316	..	200
4,263	4,160	7	96	36,202	35,596	343	..	263
4,072	3,974	8	90	34,476	33,467	391	338	280
11,481	7,620	..	3,861	75,135	24,995	1,397	42,227	6,516
12,162	7,745	..	4,417	62,875	25,426	1,308	28,597	7,544
13,901	9,159	..	4,742	79,739	25,339	1,181	43,524	9,696
15,060	9,385	..	5,675	74,329	25,887	1,315	34,435	12,692
441	441	..	..	15,998	11,990	3,987	..	21
438	438	..	..	18,722	12,079	6,519	..	124
412	412	..	..	17,081	10,625	6,172	..	284
347	347	..	..	16,527	11,557	4,663	..	307
688	654	..	34	44,925	22,980	3,493	15,545	2,907
708	686	..	22	46,130	21,921	5,423	16,125	2,661
721	690	..	31	43,580	20,883	3,383	16,555	2,759
737	702	..	36	40,029	17,125	3,320	16,626	2,958
420	414	6	..	11,564	4,779	5,502	..	1,283
373	367	6	..	13,259	4,068	7,779	..	1,412
375	370	6	..	12,385	4,816	5,927	..	1,642
405	399	6	..	12,981	5,266	5,805	..	1,910
9,112	8,423	611	78	77,939	44,360	2,429	28,340	2,810
8,785	8,191	494	99	79,247	44,147	2,185	29,921	2,994
8,737	8,065	575	98	78,293	42,409	2,600	30,246	3,038
9,066	8,333	644	89	72,451	36,600	2,793	30,043	3,015
2,831	2,079	..	751	28,192	13,394	18	..	14,780
3,097	2,144	..	953	27,273	13,356	15	..	13,902
3,202	2,239	..	963	26,321	10,154	17	..	16,150
3,418	2,238	..	1,181	25,315	8,967	17	..	16,330
164	164	..	..	12,997	12,233	26	..	737
124	123	..	1	12,241	11,560	15	..	666
94	91	1	2	7,521	6,745	18	..	759
183	177	4	2	5,773	4,782	26	..	965
..	..	..	..	334	163	111	..	60
..	..	..	..	352	180	108	..	64
..	..	..	..	386	230	104	..	53
..	..	..	..	407	249	109	..	49
9,833	8,571	1,003	259	57,691	16,460	13,769	22,477	4,985
10,711	9,474	944	292	59,552	18,484	12,357	22,793	5,918
10,819	9,713	760	346	57,831	16,210	11,661	23,870	6,090
10,079	8,602	1,094	383	58,871	12,790	14,789	23,291	8,001
16,801	12,936	527	3,337	545,176	59,942	54,608	398,359	32,267
20,726	16,348	609	3,769	561,059	41,298	69,863	412,942	36,956
22,378	17,548	595	4,235	548,535	44,600	60,977	399,012	43,946
21,652	16,275	590	4,788	510,110	40,756	65,943	353,833	49,579
56,777	55,489	172	1,116	596,946	348,797	25,983	76,324	145,842
54,957	53,785	87	1,085	585,511	331,660	23,776	76,005	154,070
53,336	52,318	98	920	553,581	281,896	25,573	75,071	171,041
51,760	50,652	90	1,018	520,906	250,205	24,786	64,382	181,533
..	..	..	..	214	213	..	..	0
..	..	..	..	215	215	..	..	0
..	..	..	..	220	220	..	..	0
..	..	..	..	215	215	..	..	0

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Greece	2017	55,266	41,698	4,040	..	5,537	3,991	..
	2018	53,263	37,412	5,760	..	6,300	3,791	..
	2019	48,626	32,880	4,051	..	7,266	4,429	..
	2020	48,252	31,055	3,440	..	9,310	4,447	..
Guernsey	2017	77	77	..	..	..	..	..
	2018	54	54	..	..	..	0	..
	2019	165	164	..	..	..	0	..
	2020	23	23	..	..	..	0	..
Hungary	2017	32,915	15,407	220	16,098	758	349	83
	2018	32,067	14,725	222	15,733	607	629	151
	2019	34,291	15,429	219	16,288	729	1,497	129
	2020	34,930	15,358	244	16,055	655	2,459	159
Iceland	2017	19,239	2	14,059	..	8	..	5,170
	2018	19,830	2	13,814	..	4	..	6,010
	2019	19,489	3	13,461	..	7	..	6,018
	2020	19,127	3	13,157	..	7	..	5,961
Ireland	2017	30,876	22,525	895	..	7,444	12	..
	2018	31,139	21,546	932	..	8,640	22	..
	2019	30,960	19,768	1,132	..	10,019	40	..
	2020	32,290	19,453	1,224	..	11,549	64	..
Isle of Man	2017	467	463	4	..	..	..	..
	2018	493	490	*2	..	..	..	..
	2019	581	578	3	..	..	..	..
	2020	552	548	4	..	..	..	..
Italy	2017	295,830	208,824	38,025	..	17,742	24,378	6,862
	2018	289,708	192,129	50,503	..	17,716	22,654	6,707
	2019	293,853	195,084	48,154	..	20,202	23,689	6,725
	2020	280,531	180,805	49,495	..	18,762	24,942	6,528
Jersey	2017	49	49	..	..	..	..	..
	2018	45	45	..	..	..	..	..
	2019	44	44	..	..	..	..	..
	2020	*43	*43	..	..	..	..	..
Kosovo	2017	5,918	5,738	179	..	0	1	..
	2018	5,915	5,611	273	..	30	2	..
	2019	6,351	6,037	213	..	91	11	..
	2020	6,711	6,348	263	..	90	10	..
Latvia	2017	7,531	3,000	4,381	..	150	0	..
	2018	6,725	4,170	2,432	..	122	1	..
	2019	6,438	4,174	2,108	..	154	3	..
	2020	5,725	2,940	2,603	..	177	5	..
Liechtenstein	2017	93	2	69	..	..	22	..
	2018	89	2	62	..	..	25	..
	2019	103	2	75	..	..	26	..
	2020	104	2	72	..	..	30	..
Lithuania	2017	4,187	1,324	1,181	..	1,364	68	250
	2018	3,511	1,089	960	..	1,144	87	232
	2019	3,972	1,210	948	..	1,499	91	223
	2020	5,518	2,550	1,080	..	1,552	129	207
Luxembourg	2017	2,235	470	1,422	..	235	108	..
	2018	2,200	490	1,337	..	255	119	..
	2019	1,908	547	949	..	281	130	..
	2020	2,234	627	1,094	..	351	161	..
Malta	2017	1,652	1,489	..	..	0	162	..
	2018	1,962	1,772	..	..	0	190	..
	2019	2,060	1,864	..	..	0	195	..
	2020	2,143	1,906	..	..	0	237	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
1,933	1,933	..	..	53,333	39,765	4,040	..	9,528
2,215	2,215	..	..	51,048	35,197	5,760	..	10,091
2,480	2,480	..	..	46,146	30,400	4,051	..	11,695
2,712	2,712	..	..	45,539	28,342	3,440	..	13,757
..	..	..	..	77	77	..	..	..
..	..	..	..	54	54	..	..	0
..	..	..	..	165	164	..	..	0
..	..	..	..	23	23	..	..	0
1,300	906	..	394	31,615	14,501	220	16,098	796
1,577	982	..	595	30,490	13,743	222	15,733	792
1,978	1,056	..	922	32,313	14,373	219	16,288	1,433
2,352	1,017	..	1,335	32,578	14,341	244	16,055	1,938
..	..	..	..	19,239	2	14,059	..	5,178
..	..	..	..	19,830	2	13,814	..	6,014
..	..	..	..	19,489	3	13,461	..	6,025
..	..	..	..	19,127	3	13,157	..	5,967
2,239	2,191	..	48	28,637	20,334	895	..	7,408
2,214	2,153	..	61	28,925	19,393	932	..	8,600
2,176	2,084	..	92	28,784	17,684	1,132	..	9,967
2,218	2,100	..	117	30,072	17,352	1,224	..	11,496
24	24	..	..	443	439	4	..	..
*33	*33	..	..	460	457	*2	..	..
*33	*33	..	..	548	545	3	..	..
*33	*33	..	..	518	515	4	..	..
19,782	19,150	489	143	276,048	189,674	37,536	..	48,839
22,784	22,114	466	204	266,925	170,015	50,037	..	46,873
22,340	21,695	492	153	271,513	173,389	47,661	..	50,463
20,335	19,658	465	212	260,196	161,147	49,030	..	50,019
44	44	..	..	4	4	..	..	..
43	43	..	..	2	2	..	..	..
42	42	..	..	2	2	..	..	..
*42	*42	..	..	1	1	..	..	..
..	..	..	..	5,918	5,738	179	..	1
..	..	..	..	5,915	5,611	273	..	32
0	..	..	0	6,351	6,037	213	..	101
..	..	..	..	6,711	6,348	263	..	101
194	188	4	3	7,337	2,812	4,377	..	148
190	186	2	2	6,535	3,984	2,430	..	121
187	180	2	5	6,251	3,994	2,106	..	152
182	173	2	7	5,543	2,767	2,601	..	175
..	..	..	..	93	2	69	..	22
..	..	..	..	89	2	62	..	25
..	..	..	..	103	2	75	..	26
..	..	..	..	104	2	72	..	30
826	576	..	250	3,361	748	1,181	..	1,432
647	416	..	232	2,864	674	960	..	1,231
821	598	..	223	3,151	612	948	..	1,591
816	609	..	207	4,702	1,941	1,080	..	1,681
278	165	4	108	1,957	304	1,418	..	235
282	159	4	119	1,918	331	1,332	..	255
285	150	5	130	1,623	398	944	..	281
308	142	5	161	1,926	485	1,090	..	351
172	10	..	162	1,480	1,480	..	..	..
199	9	..	190	1,763	1,763	..	..	..
202	6	..	195	1,858	1,858	..	..	..
243	6	..	237	1,900	1,900	..	..	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Montenegro	2017	2,483	1,348	1,040	..	95	..	..
	2018	3,679	1,444	2,092	..	141	2	..
	2019	3,423	1,506	1,621	..	293	2	..
	2020	3,386	1,615	1,448	..	320	2	..
Netherlands	2017	117,195	99,411	61	3,402	10,569	2,208	1,544
	2018	114,258	95,815	72	3,515	10,549	3,708	599
	2019	121,352	99,915	74	3,910	11,508	5,401	544
	2020	123,554	94,804	46	4,087	15,339	8,765	512
North Macedonia	2017	5,600	4,356	1,110	..	110	24	..
	2018	5,607	3,696	1,791	..	97	23	..
	2019	5,870	4,581	1,164	..	102	23	..
	2020	5,346	3,929	1,277	..	117	24	..
Norway	2017	149,480	3,190	143,112	..	2,854	..	324
	2018	146,891	3,169	139,509	..	3,876	2	334
	2019	135,292	3,010	126,404	..	5,536	13	328
	2020	154,255	2,436	141,593	..	9,911	27	289
Poland	2017	170,465	152,295	3,034	..	14,909	165	62
	2018	170,039	154,428	2,387	..	12,799	300	125
	2019	163,989	145,269	2,665	..	15,107	711	237
	2020	158,043	137,254	2,937	..	15,800	1,958	94
Portugal	2017	59,432	38,344	7,632	..	12,248	992	217
	2018	59,636	32,155	13,628	..	12,617	1,006	230
	2019	53,154	27,687	10,243	..	13,667	1,342	215
	2020	53,078	25,214	13,633	..	12,299	1,716	217
Republic of Moldova	2017	896	839	48	..	7	2	..
	2018	954	884	44	..	23	3	..
	2019	941	830	65	..	43	3	..
	2020	983	881	47	..	51	4	..
Romania	2017	64,296	28,672	14,853	11,509	7,407	1,856	..
	2018	64,876	27,308	18,097	11,377	6,322	1,771	..
	2019	59,623	23,787	16,006	11,280	6,773	1,778	..
	2020	55,935	20,088	15,701	11,466	6,945	1,733	..
Russian Federation	2017	1,094,289	702,882	187,131	203,143	140	558	435
	2018	1,115,093	716,119	193,027	204,569	232	720	426
	2019	1,121,492	713,955	196,510	208,984	331	1,279	433
	2020	1,089,668	655,850	214,388	215,745	1,241	2,022	421
Serbia	2017	37,045	27,232	9,752	..	48	13	..
	2018	37,426	25,869	11,393	..	150	13	..
	2019	37,600	26,490	10,198	..	898	14	..
	2020	37,956	27,219	9,749	..	976	13	..
Slovakia	2017	27,738	7,367	4,623	15,081	6	506	155
	2018	26,971	7,542	3,879	14,843	6	585	116
	2019	28,434	7,953	4,571	15,282	6	589	33
	2020	28,838	7,897	4,799	15,444	4	663	31
Slovenia	2017	16,326	5,610	4,141	6,285	6	284	..
	2018	16,327	5,397	4,893	5,776	6	255	..
	2019	16,100	5,287	4,683	5,821	6	303	..
	2020	17,191	5,239	5,225	6,353	6	368	..
Spain	2017	275,726	133,002	21,070	58,039	49,127	14,397	91
	2018	274,452	118,149	36,803	55,766	50,896	12,744	94
	2019	273,257	117,125	26,874	58,349	55,647	15,103	159
	2020	263,373	93,778	33,998	58,299	56,444	20,667	187
Sweden	2017	164,250	15,547	65,168	65,696	17,609	230	..
	2018	163,400	15,571	62,250	68,549	16,623	407	..
	2019	168,439	16,390	65,393	66,130	19,847	679	..
	2020	163,833	13,618	72,440	49,198	27,526	1,051	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
..	..	..	..	2,483	1,348	1,040	..	95
..	..	..	..	3,679	1,444	2,092	..	143
..	..	..	..	3,423	1,506	1,621	..	296
..	..	..	..	3,386	1,615	1,448	..	322
25,218	21,944	..	3,274	91,977	77,467	61	3,402	11,046
26,847	22,240	..	4,608	87,411	73,576	72	3,515	10,248
29,000	22,893	..	6,107	92,352	77,022	74	3,910	11,346
34,557	25,737	..	8,820	88,997	69,066	46	4,087	15,797
0	0	..	..	5,600	4,356	1,110	..	134
..	..	..	..	5,607	3,696	1,791	..	120
..	..	..	..	5,870	4,581	1,164	..	125
..	..	..	..	5,346	3,929	1,277	..	140
2,845	2,521	..	324	146,635	669	143,112	..	2,854
2,922	2,586	..	337	143,968	584	139,509	..	3,876
2,720	2,379	..	341	132,571	631	126,404	..	5,536
2,117	1,801	..	316	152,138	635	141,593	..	9,911
11,912	11,681	4	227	158,554	140,614	3,030	..	14,909
14,847	14,418	3	425	155,193	140,010	2,384	..	12,799
17,214	16,263	3	948	146,774	129,006	2,662	..	15,107
18,795	16,741	3	2,052	139,247	120,513	2,934	..	15,800
8,436	7,952	11	473	50,996	30,392	7,621	..	12,983
8,324	7,814	19	491	51,312	24,341	13,610	..	13,362
8,678	7,998	18	662	44,477	19,689	10,225	..	14,563
8,877	7,895	18	965	44,201	17,319	13,615	..	13,267
55	53	..	2	841	786	48	..	7
72	57	..	15	882	827	44	..	11
79	53	..	26	862	777	65	..	20
70	46	..	24	913	835	47	..	31
7,013	6,297	244	472	57,283	22,374	14,609	11,509	8,791
7,394	6,799	238	357	57,482	20,509	17,859	11,377	7,736
6,405	5,715	270	421	53,218	18,072	15,736	11,280	8,130
7,287	6,561	269	457	48,648	13,527	15,432	11,466	8,222
72,381	71,153	1,227	..	1,021,908	631,728	185,904	203,143	1,133
75,447	74,293	1,154	..	1,039,647	641,826	191,873	204,569	1,378
76,525	75,348	1,177	..	1,044,968	638,607	195,334	208,984	2,043
71,098	69,813	1,285	..	1,018,570	586,036	213,104	215,745	3,685
526	526	..	..	36,519	26,705	9,752	..	62
543	543	..	..	36,883	25,326	11,393	..	163
470	470	..	..	37,130	26,020	10,198	..	912
474	474	..	..	37,483	26,745	9,749	..	989
3,092	2,505	100	487	24,646	4,862	4,523	15,081	180
3,515	2,892	111	512	23,456	4,650	3,768	14,843	195
3,089	2,556	120	413	25,345	5,397	4,451	15,282	215
3,066	2,462	128	476	25,772	5,435	4,671	15,444	222
731	266	189	276	15,595	5,344	3,952	6,285	14
724	255	221	248	15,603	5,142	4,672	5,776	13
769	261	213	295	15,331	5,026	4,470	5,821	14
851	273	218	360	16,340	4,966	5,007	6,353	15
36,135	35,415	477	243	239,591	97,587	20,593	58,039	63,372
37,587	36,389	909	289	236,865	81,760	35,894	55,766	63,445
38,316	37,059	897	360	234,941	80,066	25,977	58,349	70,549
35,666	34,190	972	504	227,707	59,588	33,026	58,299	76,794
6,215	6,203	12	..	158,035	9,344	65,156	65,696	17,839
6,139	6,128	11	..	157,261	9,443	62,239	68,549	17,030
6,964	6,959	5	..	161,475	9,431	65,388	66,130	20,526
6,609	6,609	..	..	157,224	7,009	72,440	49,198	28,577



Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Switzerland	2017	63,089	3,864	37,033	20,376	133	1,683	..
	2018	69,109	3,727	37,802	25,513	122	1,945	..
	2019	73,471	3,768	40,962	26,418	146	2,178	..
	2020	71,638	3,847	41,022	24,025	145	2,599	..
Ukraine	2017	156,037	58,173	10,520	85,576	984	739	45
	2018	159,833	61,104	12,007	84,398	1,188	1,099	37
	2019	154,141	58,201	7,855	83,003	2,020	2,933	129
	2020	146,993	55,258	7,487	76,203	1,932	5,969	144
United Kingdom	2017	337,884	197,692	8,754	70,336	49,641	11,457	4
	2018	333,162	190,572	7,942	65,064	56,908	12,668	9
	2019	323,846	183,670	7,603	56,184	63,795	12,580	14
	2020	311,259	164,286	8,156	50,278	75,369	13,158	11
Latin America & Carib.	2017	<b>1,616,620</b>	<b>766,019</b>	<b>733,146</b>	<b>32,710</b>	<b>66,437</b>	<b>8,503</b>	<b>9,804</b>
	2018	<b>1,680,329</b>	<b>779,048</b>	<b>751,303</b>	<b>35,802</b>	<b>78,704</b>	<b>13,951</b>	<b>21,522</b>
	2019	<b>1,674,223</b>	<b>768,657</b>	<b>726,182</b>	<b>35,246</b>	<b>95,231</b>	<b>25,730</b>	<b>23,176</b>
	2020	<b>1,610,048</b>	<b>707,608</b>	<b>719,526</b>	<b>32,891</b>	<b>104,948</b>	<b>34,862</b>	<b>10,214</b>
Anguilla	2017	82	80	..	..	..	2	..
	2018	83	81	..	..	..	2	..
	2019	100	97	..	..	..	3	..
	2020	90	88	..	..	..	*3	..
Antigua and Barbuda	2017	*353	*344	..	..	..	9	..
	2018	362	349	..	..	..	13	..
	2019	358	345	..	..	..	13	..
	2020	344	330	..	..	..	*13	..
Argentina	2017	145,618	97,257	41,645	6,088	612	16	..
	2018	152,224	102,820	41,430	6,453	1,413	108	..
	2019	145,990	95,389	36,878	7,927	4,996	800	..
	2020	144,924	99,199	24,262	10,707	9,412	1,345	..
Aruba	2017	*978	*835	..	..	*144	..	..
	2018	*991	*808	..	..	*175	*8	..
	2019	*997	*822	..	..	*165	*10	..
	2020	*1,001	*825	..	..	*165	*11	..
Bahamas	2017	*1,989	*1,987	..	..	..	2	..
	2018	*1,999	*1,997	..	..	..	2	..
	2019	*2,010	*2,007	..	..	..	3	..
	2020	*2,020	*2,017	..	..	..	*3	..
Barbados	2017	1,047	1,009	..	..	..	38	..
	2018	1,055	1,011	..	..	..	44	..
	2019	1,070	1,018	..	..	..	52	..
	2020	1,067	999	..	..	..	69	..
Belize	2017	406	135	271	..	..	0	..
	2018	416	166	250	..	..	1	..
	2019	305	230	75	..	..	1	..
	2020	434	191	242	..	..	1	..
Bolivia (Plur. State of)	2017	9,617	7,317	2,234	..	60	6	..
	2018	9,855	7,056	2,612	..	59	127	..
	2019	10,172	6,662	3,251	..	70	188	..
	2020	9,977	6,638	2,942	..	64	332	..
Bonaire, St Eustatius, Saba	2017	137	101	..	..	32	4	..
	2018	*137	*91	..	..	*37	8	..
	2019	*145	*104	..	..	*33	9	..
	2020	145	112	..	..	25	8	..
Brazil	2017	589,326	159,476	370,906	15,739	42,373	832	..
	2018	601,396	144,815	388,971	15,674	48,475	3,461	..
	2019	626,329	149,682	397,877	16,129	55,986	6,655	..
	2020	621,198	143,017	396,328	14,053	57,050	10,750	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
7,497	3,202	2,612	1,683	55,592	662	34,421	20,376	133
7,963	3,131	2,888	1,945	61,145	596	34,915	25,513	122
8,213	3,152	2,883	2,178	65,258	616	38,079	26,418	146
8,634	3,181	2,854	2,599	63,004	666	38,168	24,025	145
3,976	3,899	4	73	152,061	54,274	10,516	85,576	1,695
2,658	2,611	2	45	157,175	58,493	12,005	84,398	2,279
2,262	2,124	..	138	151,880	56,077	7,855	83,003	4,944
3,328	3,161	..	167	143,665	52,097	7,487	76,203	7,878
55,145	36,271	1,703	17,170	282,740	161,420	7,051	70,336	43,932
58,116	38,341	1,643	18,131	275,047	152,230	6,299	65,064	51,454
62,081	42,970	1,656	17,455	261,765	140,700	5,946	56,184	58,934
63,069	43,118	1,756	18,194	248,190	121,168	6,400	50,278	70,344
<b>213,482</b>	<b>180,562</b>	<b>22,568</b>	<b>10,352</b>	<b>1,403,138</b>	<b>585,457</b>	<b>710,579</b>	<b>32,710</b>	<b>74,392</b>
<b>220,052</b>	<b>184,130</b>	<b>23,738</b>	<b>12,184</b>	<b>1,460,278</b>	<b>594,918</b>	<b>727,565</b>	<b>35,802</b>	<b>101,993</b>
<b>220,880</b>	<b>181,573</b>	<b>23,868</b>	<b>15,438</b>	<b>1,453,343</b>	<b>587,084</b>	<b>702,314</b>	<b>35,246</b>	<b>128,699</b>
<b>226,107</b>	<b>185,628</b>	<b>21,954</b>	<b>18,526</b>	<b>1,383,941</b>	<b>521,980</b>	<b>697,572</b>	<b>32,891</b>	<b>131,498</b>
..	..	..	..	82	80	..	..	2
..	..	..	..	83	81	..	..	2
..	..	..	..	100	97	..	..	3
..	..	..	..	90	88	..	..	*3
*1	*1	..	..	*352	*343	..	..	9
*1	*1	..	..	361	348	..	..	13
*1	*1	..	..	357	344	..	..	13
*1	*1	..	..	343	329	..	..	*13
14,744	14,698	46	..	130,874	82,559	41,599	6,088	628
14,744	14,698	46	..	137,480	88,122	41,384	6,453	1,521
14,744	14,698	46	..	131,246	80,691	36,832	7,927	5,796
13,785	13,743	42	..	131,139	85,456	24,220	10,707	10,757
..	..	..	..	*978	*835	..	..	*144
..	..	..	..	*991	*808	..	..	*183
..	..	..	..	*997	*822	..	..	*175
..	..	..	..	*1,001	*825	..	..	*176
*75	*75	..	..	*1,914	*1,912	..	..	2
*80	*80	..	..	*1,919	*1,917	..	..	2
*92	*92	..	..	*1,918	*1,915	..	..	3
*98	*98	..	..	*1,922	*1,919	..	..	*3
17	17	..	..	1,030	992	..	..	38
17	17	..	..	1,038	994	..	..	44
18	18	..	..	1,053	1,001	..	..	52
17	17	..	..	1,051	982	..	..	69
82	82	..	..	323	53	271	..	0
94	94	..	..	322	72	250	..	1
92	92	..	..	213	137	75	..	1
74	74	..	..	360	117	242	..	1
352	348	4	..	9,265	6,969	2,230	..	66
362	356	7	..	9,493	6,701	2,606	..	186
435	429	7	..	9,737	6,234	3,245	..	258
432	429	3	..	9,545	6,209	2,939	..	397
..	..	..	..	137	101	..	..	35
..	..	..	..	*137	*91	..	..	*45
..	..	..	..	*145	*104	..	..	*41
..	..	..	..	145	112	..	..	33
98,179	79,383	18,593	203	491,147	80,093	352,313	15,739	43,002
101,164	81,273	19,330	561	500,232	63,542	369,641	15,674	51,375
102,385	81,249	19,427	1,709	523,944	68,433	378,450	16,129	60,932
106,451	83,876	17,745	4,830	514,747	59,141	378,583	14,053	62,970

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
British Virgin Islands	2017	173	172	..	..	*1	0	..
	2018	160	159	..	..	*1	0	..
	2019	*161	*160	..	..	*1	0	..
	2020	*162	*160	..	..	*1	0	..
Cayman Islands	2017	671	671	..	..	..	..	..
	2018	658	658	..	..	..	..	..
	2019	696	696	..	..	..	..	..
	2020	668	668	..	..	..	..	..
Chile	2017	79,443	50,628	21,315	..	3,521	3,915	64
	2018	82,339	49,952	23,367	..	3,588	5,218	214
	2019	84,558	50,564	22,477	..	4,897	6,419	202
	2020	83,994	48,331	21,873	..	5,602	7,971	216
Colombia	2017	75,125	17,641	57,476	..	3	5	..
	2018	78,426	21,563	56,809	..	43	11	..
	2019	80,415	25,622	54,594	..	63	137	..
	2020	79,550	29,361	49,977	..	10	201	..
Costa Rica	2017	11,359	237	8,677	..	1,288	40	1,118
	2018	11,528	358	8,343	..	1,799	60	969
	2019	11,508	295	7,827	..	1,796	77	1,513
	2020	11,743	225	8,294	..	1,459	76	1,689
Cuba	2017	20,558	20,394	83	..	*21	*60	..
	2018	20,837	20,524	146	..	*44	*124	..
	2019	21,078	20,703	125	..	*65	*186	..
	2020	19,428	19,055	112	..	*68	*193	..
Curaçao	2017	891	702	..	..	169	20	..
	2018	866	612	..	..	234	20	..
	2019	879	651	..	..	208	20	..
	2020	839	626	..	..	191	22	..
Dominica	2017	131	103	27	..	1	0	..
	2018	110	*85	24	..	1	0	..
	2019	138	117	20	..	*1	0	..
	2020	142	122	19	..	*1	0	..
Dominican Republic	2017	19,036	16,309	2,196	..	390	140	..
	2018	19,651	17,144	1,780	..	497	230	..
	2019	19,857	18,121	928	..	552	256	..
	2020	16,629	13,880	1,176	..	1,139	434	..
Ecuador	2017	28,033	7,833	20,089	..	73	37	..
	2018	29,244	8,447	20,678	..	80	38	..
	2019	32,284	7,520	24,641	..	86	38	..
	2020	31,248	6,800	24,333	..	77	38	..
El Salvador	2017	5,494	2,083	1,704	..	..	137	1,569
	2018	5,359	1,937	1,631	..	..	246	1,545
	2019	6,070	2,582	1,526	..	..	489	1,474
	2020	6,350	1,790	2,084	..	14	904	1,557
Falkland Is. (Malvinas)	2017	18	12	..	..	5	0	..
	2018	17	12	..	..	5	0	..
	2019	18	12	..	..	5	0	..
	2020	18	13	..	..	5	0	..
Grenada	2017	230	227	..	..	..	3	..
	2018	234	231	..	..	..	3	..
	2019	243	239	..	..	..	3	..
	2020	226	223	..	..	..	4	..
Guatemala	2017	12,272	5,816	5,787	..	218	198	253
	2018	13,568	7,572	5,218	..	320	208	250
	2019	*14,083	*8,855	4,497	..	221	199	312
	2020	12,803	*5,971	5,966	..	317	222	326

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
..	..	..	..	173	172	..	..	*1
..	..	..	..	160	159	..	..	*1
..	..	..	..	*161	*160	..	..	*1
..	..	..	..	*162	*160	..	..	*2
..	..	..	..	671	671	..	..	..
..	..	..	..	658	658	..	..	..
..	..	..	..	696	696	..	..	..
..	..	..	..	668	668	..	..	..
7,384	7,338	44	2	72,059	43,290	21,271	..	7,497
6,975	6,910	60	5	75,364	43,043	23,307	..	9,015
6,525	6,488	30	8	78,033	44,076	22,447	..	11,510
6,625	6,548	58	19	77,369	41,783	21,816	..	13,770
8,568	8,420	148	..	66,557	9,221	57,328	..	8
9,483	9,322	161	..	68,943	12,241	56,648	..	54
11,039	10,872	157	10	69,377	14,749	54,437	..	191
11,008	10,858	140	10	68,541	18,503	49,837	..	201
237	200	..	37	11,123	37	8,677	..	2,408
250	200	..	50	11,279	159	8,343	..	2,777
267	200	..	67	11,241	96	7,827	..	3,319
268	201	..	67	11,476	24	8,294	..	3,158
963	963	..	..	19,595	19,431	83	..	*81
763	763	..	..	20,074	19,761	146	..	*168
842	842	..	..	20,236	19,861	125	..	*251
898	898	..	..	18,530	18,157	112	..	*261
74	74	..	..	817	628	..	..	189
114	114	..	..	752	498	..	..	254
43	43	..	..	836	608	..	..	228
24	24	..	..	815	601	..	..	214
*44	*44	..	..	87	58	27	..	1
*44	*44	..	..	66	41	24	..	1
*44	*44	..	..	94	73	20	..	*1
*44	*44	..	..	98	78	19	..	*1
1,919	1,821	6	92	17,117	14,489	2,190	..	438
2,011	1,856	7	148	17,640	15,288	1,773	..	580
3,512	3,348	..	164	16,345	14,774	928	..	643
2,173	1,894	..	279	14,456	11,985	1,176	..	1,294
5,027	3,956	1,071	..	23,006	3,878	19,017	..	111
5,494	4,129	1,365	..	23,750	4,318	19,313	..	118
5,914	4,254	1,660	..	26,369	3,266	22,980	..	123
5,636	4,049	1,587	..	25,612	2,751	22,747	..	115
168	40	85	43	5,326	2,043	1,619	..	1,664
227	27	83	117	5,132	1,910	1,548	..	1,675
382	29	81	273	5,688	2,553	1,445	..	1,690
527	27	94	406	5,822	1,763	1,990	..	2,069
..	..	..	..	18	12	..	..	5
..	..	..	..	17	12	..	..	6
..	..	..	..	18	12	..	..	5
..	..	..	..	18	13	..	..	5
2	2	..	..	228	225	..	..	3
3	3	..	..	231	228	..	..	3
3	3	..	..	239	236	..	..	3
3	3	..	..	223	220	..	..	4
783	761	22	..	11,490	5,055	5,765	..	669
1,046	1,018	27	..	12,522	6,554	5,191	..	778
1,335	1,308	27	..	*12,748	*7,547	4,470	..	732
564	532	32	..	12,238	*5,439	5,934	..	865

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Guyana	2017	1,105	1,098	..	..	0	7	..
	2018	1,136	1,125	..	..	0	11	..
	2019	1,135	1,123	..	..	0	11	..
	2020	1,136	1,124	..	..	0	12	..
Haiti	2017	1,058	928	127	..	..	3	..
	2018	1,048	848	197	..	..	3	..
	2019	1,064	887	174	..	..	3	..
	2020	1,029	919	106	..	..	3	..
Honduras	2017	9,385	4,820	2,971	..	578	924	93
	2018	9,629	4,253	3,158	..	929	993	297
	2019	10,586	5,866	2,430	..	818	1,176	296
	2020	10,059	5,232	2,701	..	707	1,113	307
Jamaica	2017	4,360	3,873	154	..	289	44	..
	2018	4,402	3,875	179	..	302	46	..
	2019	4,425	3,948	157	..	274	47	..
	2020	4,844	4,399	133	..	275	36	..
Mexico	2017	322,062	261,725	31,981	10,883	10,442	1,085	5,945
	2018	357,593	279,725	32,526	13,675	12,877	1,363	17,427
	2019	344,176	266,753	23,716	11,190	16,880	7,057	18,580
	2020	314,549	245,464	26,817	8,131	19,702	9,115	5,320
Montserrat	2017	13	13	..	..	..	..	..
	2018	14	14	..	..	..	..	..
	2019	14	14	..	..	..	0	..
	2020	14	14	..	..	..	0	..
Nicaragua	2017	4,525	2,657	468	..	635	14	751
	2018	4,636	2,599	411	..	801	24	801
	2019	4,576	2,815	227	..	730	26	778
	2020	3,791	1,873	574	..	550	26	767
Panama	2017	11,054	3,141	7,256	..	491	156	9
	2018	11,353	2,657	7,858	..	588	233	18
	2019	11,663	5,527	5,096	..	725	295	20
	2020	10,970	2,685	7,353	..	584	318	30
Paraguay	2017	59,685	2	59,684	..	..	..	..
	2018	59,212	2	59,211	..	..	..	..
	2019	49,448	2	49,446	..	..	..	..
	2020	46,373	2	46,371	..	..	..	..
Peru	2017	52,743	22,265	29,075	..	1,073	330	..
	2018	54,982	21,946	30,737	..	1,502	797	..
	2019	57,038	23,088	31,462	..	1,655	833	..
	2020	52,803	19,624	30,510	..	1,814	856	..
Puerto Rico	2017	16,371	16,013	51	..	149	159	..
	2018	17,453	17,226	38	..	108	81	..
	2019	18,886	18,444	41	..	159	242	..
	2020	18,774	18,321	51	..	143	259	..
Sint Maarten (Dutch part)	2017	*300	*300	..	..	..	..	..
	2018	*291	*291	..	..	..	..	..
	2019	*296	*296	..	..	..	..	..
	2020	265	265	..	..	..	..	..
St. Kitts-Nevis	2017	229	221	..	..	5	3	..
	2018	*230	*221	..	..	6	3	..
	2019	*232	*224	..	..	6	3	..
	2020	*219	*210	..	..	6	3	..
St. Lucia	2017	400	400	..	..	..	..	..
	2018	404	399	..	..	..	5	..
	2019	415	408	..	..	..	7	..
	2020	378	372	..	..	..	7	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
82	82	..	..	1,022	1,015	..	..	7
82	82	..	..	1,054	1,043	..	..	11
30	30	..	..	1,105	1,094	..	..	11
24	24	..	..	1,112	1,100	..	..	12
23	23	..	..	1,035	905	127	..	3
21	21	..	..	1,027	827	197	..	3
22	22	..	..	1,042	865	174	..	3
21	21	..	..	1,008	898	106	..	3
1,511	1,511	..	..	7,875	3,309	2,971	..	1,595
1,647	1,647	..	..	7,982	2,606	3,158	..	2,219
1,991	1,931	0	60	8,595	3,935	2,430	..	2,230
1,744	1,675	0	69	8,315	3,556	2,701	..	2,058
1,827	1,494	..	333	2,533	2,379	154	..	..
1,841	1,493	..	348	2,561	2,382	179	..	..
1,508	1,187	..	321	2,917	2,761	157	..	..
*872	*560	..	312	3,972	3,839	133	..	..
62,984	52,566	942	9,477	259,077	209,160	31,040	10,883	7,995
64,651	52,967	905	10,779	292,942	226,758	31,621	13,675	20,888
59,882	46,466	789	12,627	284,294	220,287	22,927	11,190	29,890
66,737	53,611	808	12,318	247,812	191,853	26,009	8,131	21,819
..	..	..	..	13	13	..	..	..
..	..	..	..	14	14	..	..	..
..	..	..	..	14	14	..	..	0
..	..	..	..	14	14	..	..	0
711	711	0	..	3,814	1,946	468	..	1,400
735	735	0	..	3,901	1,864	411	..	1,626
889	888	..	1	3,686	1,927	227	..	1,533
778	775	..	3	3,013	1,098	574	..	1,340
32	32	..	..	11,022	3,109	7,256	..	657
161	161	..	..	11,192	2,496	7,858	..	838
1,167	1,167	..	..	10,495	4,359	5,096	..	1,040
924	767	156	1	10,046	1,918	7,197	..	931
..	..	..	..	59,685	2	59,684	..	..
..	..	..	..	59,212	2	59,211	..	..
..	..	..	..	49,448	2	49,446	..	..
..	..	..	..	46,373	2	46,371	..	..
2,398	1,674	682	43	50,345	20,591	28,393	..	1,361
2,615	1,821	748	46	52,368	20,125	29,989	..	2,253
2,574	1,827	693	54	54,464	21,261	30,769	..	2,434
2,130	1,454	615	61	50,673	18,169	29,895	..	2,608
210	210	..	..	16,161	15,803	51	..	308
220	220	..	..	17,233	17,006	38	..	189
*230	*230	..	..	18,656	18,214	41	..	401
*232	*232	..	..	18,542	18,089	51	..	402
..	..	..	..	*300	*300	..	..	..
..	..	..	..	*291	*291	..	..	..
..	..	..	..	*296	*296	..	..	..
..	..	..	..	265	265	..	..	..
*1	*1	..	..	228	220	..	..	8
*1	*1	..	..	*229	*220	..	..	9
*1	*1	..	..	*231	*223	..	..	9
*1	*1	..	..	*218	*209	..	..	9
..	..	..	..	400	400	..	..	..
..	..	..	..	404	399	..	..	5
..	..	..	..	415	408	..	..	7
..	..	..	..	378	372	..	..	7

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
St. Vincent-Grenadines	2017	151	129	20	..	..	1	..
	2018	151	125	24	..	..	2	..
	2019	154	130	22	..	..	3	..
	2020	154	129	22	..	..	3	..
Suriname	2017	1,805	871	926	..	..	9	..
	2018	1,792	782	1,000	..	..	10	..
	2019	1,868	906	952	..	..	10	..
	2020	1,727	1,043	674	..	..	*10	..
Trinidad and Tobago	2017	9,323	9,318	..	..	0	6	..
	2018	9,225	9,220	..	..	0	5	..
	2019	9,188	9,183	..	..	0	5	..
	2020	9,225	9,220	..	..	0	5	..
Turks and Caicos Islands	2017	*293	*293	..	..	..	0	..
	2018	*258	*257	..	..	..	1	..
	2019	*261	*260	..	..	..	1	..
	2020	*256	*255	..	..	..	*1	..
United States Virgin Is.	2017	*611	*589	..	..	0	*21	..
	2018	*626	*605	..	..	0	*21	..
	2019	*672	*647	..	..	0	*24	..
	2020	*660	*635	..	..	0	*25	..
Uruguay	2017	14,363	2,802	7,518	..	3,775	269	..
	2018	14,623	2,921	6,557	..	4,732	414	..
	2019	16,090	2,806	8,108	..	4,752	424	..
	2020	13,557	3,526	4,094	..	5,476	462	..
Venezuela (Bolivar. Rep.)	2017	103,796	43,193	60,507	..	88	7	*1
	2018	99,757	41,511	58,150	..	88	6	*1
	2019	82,571	32,837	49,637	..	88	9	*1
	2020	74,265	11,656	62,510	..	88	9	*1
<b>Northern America</b>	<b>2017</b>	<b>4,950,992</b>	<b>2,902,656</b>	<b>720,162</b>	<b>940,160</b>	<b>288,760</b>	<b>74,873</b>	<b>24,381</b>
	<b>2018</b>	<b>5,115,013</b>	<b>3,047,025</b>	<b>703,379</b>	<b>942,060</b>	<b>308,976</b>	<b>89,293</b>	<b>24,279</b>
	<b>2019</b>	<b>5,045,638</b>	<b>2,951,846</b>	<b>692,812</b>	<b>944,527</b>	<b>330,948</b>	<b>101,895</b>	<b>23,609</b>
	<b>2020</b>	<b>4,913,140</b>	<b>2,770,904</b>	<b>695,250</b>	<b>921,345</b>	<b>377,456</b>	<b>124,177</b>	<b>24,008</b>
Bermuda	2017	676	675	..	..	..	*1	..
	2018	644	642	..	..	..	*2	..
	2019	613	611	..	..	..	*2	..
	2020	*590	*588	..	..	..	*2	..
Canada	2017	663,320	131,748	394,659	101,299	31,511	3,892	211
	2018	658,332	134,152	385,967	100,731	33,142	4,107	233
	2019	652,675	132,301	381,843	101,197	32,748	4,415	171
	2020	651,896	126,288	386,617	98,195	35,638	4,846	312
Greenland	2017	518	130	388	..	..	..	..
	2018	547	*139	408	..	..	..	..
	2019	537	*139	398	..	..	..	..
	2020	559	*139	420	..	..	..	..
St. Pierre-Miquelon	2017	49	49	..	..	..	..	..
	2018	51	51	..	..	..	..	..
	2019	52	52	..	..	..	..	..
	2020	51	51	..	..	..	..	..
United States	2017	4,286,429	2,770,054	325,114	838,861	257,249	70,980	24,170
	2018	4,455,439	2,912,041	317,004	841,329	275,834	85,184	24,046
	2019	4,391,761	2,818,743	310,571	843,330	298,200	97,478	23,438
	2020	4,260,044	2,643,838	308,213	823,150	341,818	119,329	23,696
<b>Oceania</b>	<b>2017</b>	<b>315,279</b>	<b>239,947</b>	<b>43,540</b>	<b>..</b>	<b>14,741</b>	<b>8,335</b>	<b>8,716</b>
	<b>2018</b>	<b>318,605</b>	<b>238,195</b>	<b>44,203</b>	<b>..</b>	<b>17,286</b>	<b>10,253</b>	<b>8,668</b>
	<b>2019</b>	<b>322,068</b>	<b>234,301</b>	<b>43,722</b>	<b>..</b>	<b>20,036</b>	<b>15,278</b>	<b>8,732</b>
	<b>2020</b>	<b>322,058</b>	<b>227,447</b>	<b>41,567</b>	<b>..</b>	<b>22,760</b>	<b>21,538</b>	<b>8,746</b>

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
1	..	..	1	150	129	20	..	1
1	..	..	1	150	125	24	..	1
1	..	..	1	153	130	22	..	2
1	..	..	1	152	129	22	..	1
1,352	426	926	..	453	444	..	..	9
1,440	440	1,000	..	352	342	..	..	10
1,471	519	952	..	397	387	..	..	10
1,246	572	674	..	481	471	..	..	*10
82	82	..	..	9,241	9,236	..	..	6
76	76	..	..	9,149	9,144	..	..	5
76	76	..	..	9,112	9,108	..	..	5
76	76	..	..	9,149	9,144	..	..	5
..	..	..	..	*293	*293	..	..	0
..	..	..	..	*258	*257	..	..	1
..	..	..	..	*261	*260	..	..	1
..	..	..	..	*256	*255	..	..	*1
*14	..	..	*14	*597	*589	..	..	8
*14	..	..	*14	*612	*605	..	..	8
*17	..	..	*17	*655	*647	..	..	8
*17	..	..	*17	*643	*635	..	..	*8
1,650	1,635	..	15	12,713	1,167	7,518	..	4,028
1,767	1,744	..	23	12,857	1,177	6,557	..	5,123
1,702	1,668	..	34	14,388	1,138	8,108	..	5,142
1,733	1,693	..	40	11,825	1,833	4,094	..	5,898
1,985	1,892	..	93	101,811	41,301	60,507	..	3
1,911	1,818	..	92	97,846	39,692	58,150	..	3
1,644	1,552	..	92	80,927	31,285	49,637	..	6
942	849	..	92	73,323	10,807	62,510	..	6
<b>249,336</b>	<b>193,233</b>	<b>31,795</b>	<b>24,309</b>	<b>4,701,655</b>	<b>2,709,423</b>	<b>688,367</b>	<b>940,160</b>	<b>363,705</b>
<b>255,679</b>	<b>196,698</b>	<b>30,970</b>	<b>28,011</b>	<b>4,859,334</b>	<b>2,850,328</b>	<b>672,409</b>	<b>942,060</b>	<b>394,538</b>
<b>260,701</b>	<b>198,203</b>	<b>30,115</b>	<b>32,384</b>	<b>4,784,937</b>	<b>2,753,644</b>	<b>662,698</b>	<b>944,527</b>	<b>424,068</b>
<b>261,226</b>	<b>194,647</b>	<b>29,010</b>	<b>37,570</b>	<b>4,651,914</b>	<b>2,576,257</b>	<b>666,240</b>	<b>921,345</b>	<b>488,071</b>
*14	*13	..	*1	662	662	..	..	..
*15	*13	..	*2	629	629	..	..	..
*15	*13	..	*2	598	598	..	..	..
*15	*13	..	*2	*575	*575	..	..	..
63,382	31,272	30,139	1,971	599,938	100,476	364,520	101,299	33,643
62,393	30,706	29,553	2,134	595,939	103,446	356,414	100,731	35,348
61,189	29,941	28,876	2,372	591,486	102,360	352,967	101,197	34,962
61,133	30,718	27,778	2,637	590,763	95,570	358,839	98,195	38,159
..	..	..	..	518	130	388	..	..
..	..	..	..	547	*139	408	..	..
..	..	..	..	537	*139	398	..	..
..	..	..	..	559	*139	420	..	..
..	..	..	..	49	49	..	..	..
..	..	..	..	51	51	..	..	..
..	..	..	..	52	52	..	..	..
..	..	..	..	51	51	..	..	..
185,940	161,948	1,656	22,337	4,100,488	2,608,106	323,458	838,861	330,062
193,271	165,979	1,417	25,875	4,262,168	2,746,063	315,587	841,329	359,190
199,497	168,249	1,239	30,010	4,192,264	2,650,495	309,332	843,330	389,106
200,078	163,916	1,232	34,931	4,059,965	2,479,922	306,981	823,150	449,912
<b>33,841</b>	<b>25,434</b>	<b>355</b>	<b>8,052</b>	<b>281,438</b>	<b>214,513</b>	<b>43,185</b>	..	<b>23,740</b>
<b>36,794</b>	<b>26,944</b>	<b>213</b>	<b>9,637</b>	<b>281,811</b>	<b>211,251</b>	<b>43,990</b>	..	<b>26,569</b>
<b>41,730</b>	<b>28,549</b>	<b>213</b>	<b>12,968</b>	<b>280,339</b>	<b>205,752</b>	<b>43,509</b>	..	<b>31,077</b>
<b>44,187</b>	<b>29,010</b>	<b>204</b>	<b>14,973</b>	<b>277,870</b>	<b>198,437</b>	<b>41,363</b>	..	<b>38,070</b>



Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
American Samoa	2017	167	162	..	..	..	5	..
	2018	*168	*163	..	..	..	5	..
	2019	*169	*164	..	..	..	*5	..
	2020	*171	*166	..	..	..	*5	..
Australia	2017	258,019	221,065	16,285	..	12,597	8,071	1
	2018	260,998	219,884	16,021	..	15,164	9,929	0
	2019	264,025	215,498	15,967	..	17,712	14,848	..
	2020	265,178	208,599	15,150	..	20,396	21,033	..
Cook Islands	2017	38	31	..	..	..	7	..
	2018	47	31	..	..	..	16	..
	2019	44	29	..	..	..	15	..
	2020	40	25	..	..	..	*15	..
Fiji	2017	1,017	514	491	..	2	9	..
	2018	1,045	464	567	..	3	12	..
	2019	1,074	498	559	..	3	13	..
	2020	989	417	558	..	1	*13	..
French Polynesia	2017	681	470	175	..	0	36	..
	2018	676	475	164	..	0	37	..
	2019	693	494	159	..	0	40	..
	2020	665	464	159	..	0	42	..
Guam	2017	1,760	1,708	..	..	*1	52	..
	2018	1,715	1,663	..	..	*1	52	..
	2019	1,724	1,672	..	..	*1	52	..
	2020	1,683	1,631	..	..	*1	52	..
Kiribati	2017	*31	*26	..	..	..	5	..
	2018	*32	*27	..	..	..	5	..
	2019	*32	*27	..	..	..	5	..
	2020	*31	*26	..	..	..	*5	..
Marshall Islands	2017	*87	*85	..	..	..	2	..
	2018	*85	*83	..	..	..	2	..
	2019	82	80	..	..	..	2	..
	2020	*82	*80	..	..	..	2	..
Micronesia (Fed. States of)	2017	*69	*65	1	..	..	2	..
	2018	*70	*65	1	..	*1	3	..
	2019	*70	*65	1	..	*1	3	..
	2020	*70	*65	*1	..	*1	*3	..
Nauru	2017	35	34	..	..	..	1	..
	2018	36	35	..	..	..	1	..
	2019	36	35	..	..	..	1	..
	2020	38	36	..	..	..	2	..
New Caledonia	2017	3,228	2,794	361	..	45	28	..
	2018	3,486	3,077	317	..	45	47	..
	2019	3,334	2,876	285	..	57	116	..
	2020	3,233	2,729	305	..	49	151	..
New Zealand	2017	44,641	9,004	25,173	..	2,091	77	8,296
	2018	44,695	8,029	26,252	..	2,068	100	8,246
	2019	45,147	8,858	25,596	..	2,255	128	8,310
	2020	44,543	9,467	24,266	..	2,305	160	8,346
Niue	2017	*3	*3	..	..	..	0	..
	2018	*4	*3	..	..	..	0	..
	2019	*4	*3	..	..	..	0	..
	2020	*4	*3	..	..	..	0	..
Northern Mariana Islands	2017	*380	*380	..	..	..	..	..
	2018	*390	*390	..	..	..	..	..
	2019	*392	*392	..	..	..	..	..
	2020	*293	*290	..	..	..	*3	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
..	..	..	..	167	162	..	..	5
..	..	..	..	*168	*163	..	..	5
..	..	..	..	*169	*164	..	..	*5
..	..	..	..	*171	*166	..	..	*5
28,941	21,507	..	7,434	229,078	199,558	16,285	..	13,235
31,974	22,969	..	9,005	229,024	196,915	16,021	..	16,088
36,981	24,671	..	12,310	227,044	190,827	15,967	..	20,250
39,762	25,450	..	14,312	225,417	183,150	15,150	..	27,117
..	..	..	..	38	31	..	..	7
..	..	..	..	47	31	..	..	16
..	..	..	..	44	29	..	..	15
..	..	..	..	40	25	..	..	*15
23	23	..	..	994	491	491	..	11
40	40	..	..	1,005	424	567	..	15
49	49	..	..	1,025	450	559	..	16
67	67	..	..	922	350	558	..	*14
..	..	..	..	681	470	175	..	36
..	..	..	..	676	475	164	..	37
..	..	..	..	693	494	159	..	40
..	..	..	..	665	464	159	..	42
..	..	..	..	1,760	1,708	..	..	52
..	..	..	..	1,715	1,663	..	..	52
..	..	..	..	1,724	1,672	..	..	52
..	..	..	..	1,683	1,631	..	..	52
*2	*2	..	..	*29	*24	..	..	5
*2	*2	..	..	*29	*24	..	..	5
*2	*2	..	..	*30	*25	..	..	5
*2	*2	..	..	*29	*24	..	..	*5
..	..	..	..	*87	*85	..	..	2
..	..	..	..	*85	*83	..	..	2
..	..	..	..	82	80	..	..	2
..	..	..	..	*82	*80	..	..	2
..	..	..	..	*69	*65	1	..	2
..	..	..	..	*70	*65	1	..	4
..	..	..	..	*70	*65	1	..	4
..	..	..	..	*70	*65	*1	..	*4
..	..	..	..	35	34	..	..	1
..	..	..	..	36	35	..	..	1
..	..	..	..	36	35	..	..	1
..	..	..	..	38	36	..	..	2
..	..	..	..	3,228	2,794	361	..	73
..	..	..	..	3,486	3,077	317	..	92
..	..	..	..	3,334	2,876	285	..	173
..	..	..	..	3,233	2,729	305	..	199
1,558	1,356	4	198	43,083	7,648	25,169	..	10,266
1,512	1,298	4	210	43,183	6,731	26,248	..	10,204
1,636	1,397	4	236	43,511	7,462	25,592	..	10,457
1,562	1,297	4	261	42,981	8,170	24,262	..	10,549
..	..	..	..	*3	*3	..	..	0
..	..	..	..	*4	*3	..	..	0
..	..	..	..	*4	*3	..	..	0
..	..	..	..	*4	*3	..	..	0
..	..	..	..	*380	*380	..	..	..
..	..	..	..	*390	*390	..	..	..
..	..	..	..	*392	*392	..	..	..
..	..	..	..	*293	*290	..	..	*3

Table 32

## Production of electricity - by type

Gigawatt-hours

Country or area	Year	Total producers						
		Total	Combustible fuels	Hydro	Nuclear	Wind	Solar	Other
Palau	2017	*98	*94	..	..	..	*4	..
	2018	*96	*92	..	..	..	*4	..
	2019	97	91	..	..	..	*6	..
	2020	*98	*92	..	..	..	*6	..
Papua New Guinea	2017	4,595	3,155	1,018	..	..	2	420
	2018	4,629	3,375	830	..	..	2	422
	2019	4,686	3,167	1,095	..	..	2	422
	2020	4,476	2,997	1,077	..	..	2	400
Samoa	2017	154	108	26	..	0	20	..
	2018	154	90	43	..	0	21	..
	2019	169	96	50	..	0	24	..
	2020	173	107	41	..	0	24	..
Solomon Islands	2017	103	99	1	..	..	3	..
	2018	104	100	1	..	..	3	..
	2019	107	103	1	..	..	3	..
	2020	107	102	*1	..	..	*3	..
Tonga	2017	67	61	..	..	0	5	..
	2018	66	62	..	..	0	4	..
	2019	71	64	..	..	0	6	..
	2020	73	64	..	..	3	7	..
Tuvalu	2017	8	6	..	..	..	2	..
	2018	*8	*6	..	..	..	2	..
	2019	*9	*7	..	..	..	2	..
	2020	*9	*7	..	..	..	*2	..
Vanuatu	2017	80	63	7	..	5	4	..
	2018	81	63	8	..	4	6	..
	2019	84	63	8	..	6	7	..
	2020	78	57	8	..	6	*7	..
Wallis and Futuna Is.	2017	*20	*19	0	..	..	0	..
	2018	*20	*20	0	..	..	0	..
	2019	*21	*20	0	..	..	0	..
	2020	*23	*23	0	..	..	0	..

Table 32

## Production of electricity - by type

Gigawatt-hours

Autoproducers				Main activity producers				
Total	Combustible fuels	Hydro	Other	Total	Combustible fuels	Hydro	Nuclear	Other
*8	*8	..	..	*90	*86	..	..	*4
*10	*10	..	..	*86	*82	..	..	*4
*12	*12	..	..	85	79	..	..	*6
*12	*12	..	..	*86	*80	..	..	*6
3,304	2,533	351	420	1,291	622	667	..	2
3,253	2,622	209	422	1,376	753	621	..	2
3,046	2,415	209	422	1,640	752	886	..	2
2,779	2,179	200	400	1,697	818	877	..	2
0	..	..	0	154	108	26	..	20
0	..	..	0	154	90	43	..	21
0	..	..	0	169	96	50	..	24
0	..	..	0	172	107	41	..	24
4	4	..	..	99	95	1	..	3
3	3	..	..	101	97	1	..	3
3	3	..	..	104	99	1	..	3
*3	*3	..	..	103	99	*1	..	*3
..	..	..	..	67	61	..	..	5
..	..	..	..	66	62	..	..	4
..	..	..	..	71	64	..	..	6
..	..	..	..	73	64	..	..	9
..	..	..	..	8	6	..	..	2
..	..	..	..	*8	*6	..	..	2
..	..	..	..	*9	*7	..	..	2
..	..	..	..	*9	*7	..	..	*2
..	..	..	..	80	63	7	..	9
..	..	..	..	81	63	8	..	11
..	..	..	..	84	63	8	..	13
..	..	..	..	78	57	8	..	*13
..	..	..	..	*20	*19	0	..	0
..	..	..	..	*20	*20	0	..	0
..	..	..	..	*21	*20	0	..	0
..	..	..	..	*23	*23	0	..	0