

### Production of heat – by type

Terajoules

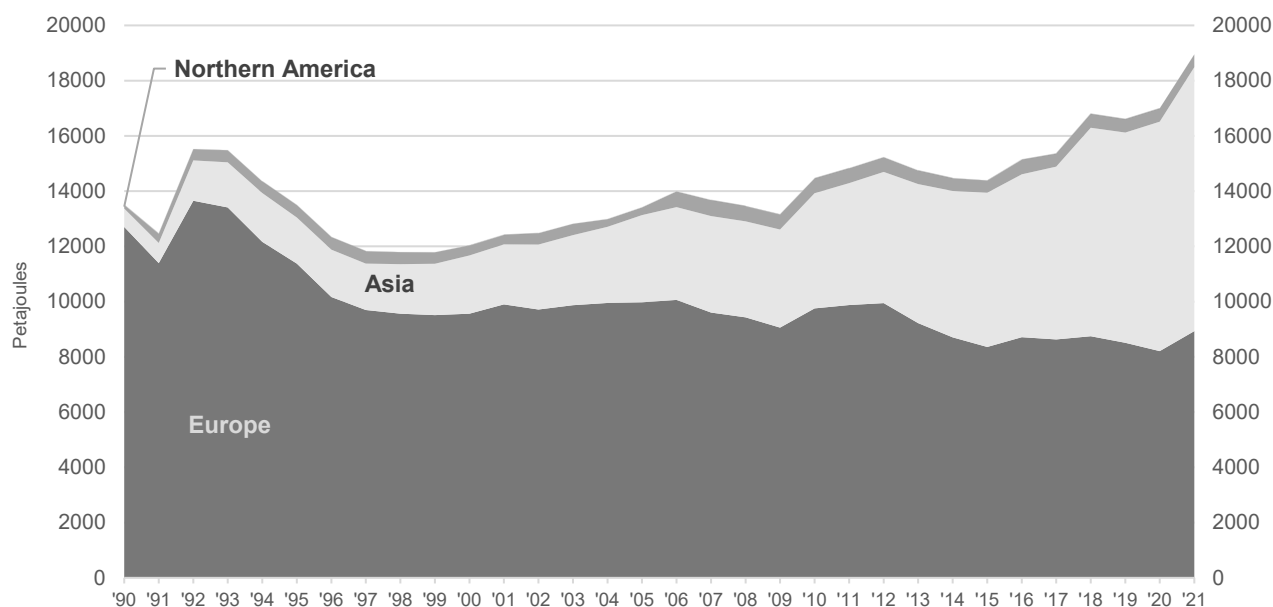
#### Table Notes

**Direct use geothermal** represents heat used directly for district heating, agriculture etc. without a commercial transaction taking place.

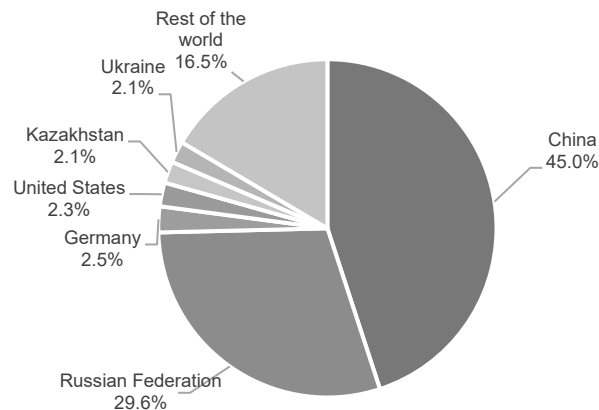
**Direct use solar thermal** represents heat used for the production of domestic hot water or for the seasonal heating of swimming pools (e.g. flat plate collectors, mainly of the thermosyphon type) without a commercial transaction taking place.

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 87: Heat production by region, 1990-2021**



**Figure 88: Major heat producing countries, 2021**



**Figure 89: World heat production by type, 2021**

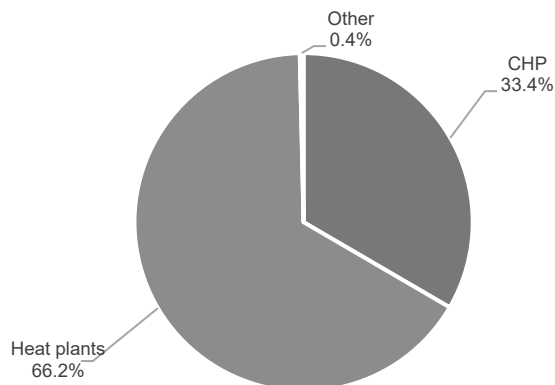


Table 35

## Production of heat - by type

Terajoules

Country or area	Year	Combustible fuels	Geo-thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
<b>World</b>	<b>2018</b>	<b>16,125,964</b>	<b>50,911</b>	<b>8,081</b>	<b>25,956</b>	<b>70,384</b>	<b>63,030</b>	<b>459,552</b>	<b>173,533</b>	<b>331,904</b>
	<b>2019</b>	<b>15,928,326</b>	<b>51,386</b>	<b>8,423</b>	<b>25,647</b>	<b>76,534</b>	<b>67,492</b>	<b>455,496</b>	<b>146,403</b>	<b>342,030</b>
	<b>2020</b>	<b>16,341,674</b>	<b>49,412</b>	<b>8,958</b>	<b>25,012</b>	<b>49,752</b>	<b>68,740</b>	<b>455,650</b>	<b>144,962</b>	<b>354,439</b>
	<b>2021</b>	<b>18,257,947</b>	<b>50,224</b>	<b>8,759</b>	<b>26,137</b>	<b>53,029</b>	<b>71,719</b>	<b>498,656</b>	<b>147,451</b>	<b>406,606</b>
<b>Africa</b>	<b>2018</b>	..	..	..	..	<b>5,094</b>	..	..	..	<b>7,921</b>
	<b>2019</b>	..	..	..	..	<b>4,880</b>	..	..	..	<b>8,092</b>
	<b>2020</b>	..	..	..	..	<b>3,629</b>	..	..	..	<b>7,865</b>
	<b>2021</b>	..	..	..	..	<b>3,651</b>	..	..	..	<b>11,238</b>
Botswana	2018	..	..	..	..	..	..	..	..	46
	2019	..	..	..	..	..	..	..	..	54
	2020	..	..	..	..	..	..	..	..	55
	2021	..	..	..	..	..	..	..	..	63
Morocco	2018	..	..	..	..	..	..	..	..	..
	2019	..	..	..	..	..	..	..	..	..
	2020	..	..	..	..	..	..	..	..	..
	2021	..	..	..	..	..	..	..	..	3,035
Namibia	2018	..	..	..	..	..	..	..	..	152
	2019	..	..	..	..	..	..	..	..	166
	2020	..	..	..	..	..	..	..	..	177
	2021	..	..	..	..	..	..	..	..	177
Senegal	2018	..	..	..	..	969	..	..	..	..
	2019	..	..	..	..	630	..	..	..	..
	2020	..	..	..	..	469	..	..	..	..
	2021	..	..	..	..	392	..	..	..	..
South Africa	2018	..	..	..	..	..	..	..	..	5,280
	2019	..	..	..	..	..	..	..	..	5,296
	2020	..	..	..	..	..	..	..	..	4,960
	2021	..	..	..	..	..	..	..	..	5,204
Tunisia	2018	..	..	..	..	4,125	..	..	..	2,443
	2019	..	..	..	..	4,250	..	..	..	2,576
	2020	..	..	..	..	3,160	..	..	..	2,673
	2021	..	..	..	..	3,259	..	..	..	2,759
<b>Asia</b>	<b>2018</b>	<b>7,503,496</b>	..	<b>5,778</b>	..	<b>2,172</b>	<b>17,610</b>	<b>18,362</b>	<b>96,578</b>	<b>84,412</b>
	<b>2019</b>	<b>7,563,877</b>	..	<b>5,925</b>	..	<b>2,170</b>	<b>22,564</b>	<b>20,213</b>	<b>97,266</b>	<b>81,709</b>
	<b>2020</b>	<b>8,249,688</b>	..	<b>6,078</b>	..	<b>2,164</b>	<b>21,498</b>	<b>24,731</b>	<b>97,854</b>	<b>84,168</b>
	<b>2021</b>	<b>9,521,888</b>	..	<b>6,252</b>	..	<b>2,160</b>	<b>18,439</b>	<b>24,499</b>	<b>98,670</b>	<b>84,360</b>
Armenia	2018	24	..	..	..	..	..	..	..	216
	2019	27	..	..	..	..	..	..	..	358
	2020	38	..	..	..	..	..	..	..	600
	2021	11	..	..	..	..	..	..	..	651
Azerbaijan	2018	12,236	..	..	..	..	3	..	..	..
	2019	14,013	..	..	..	..	3	..	..	..
	2020	13,661	..	..	..	..	2	..	..	..
	2021	14,678	..	..	..	..	8	..	..	..
China	2018	6,505,618	..	..	..	..	..	..	..	..
	2019	6,617,368	..	..	..	..	..	..	..	..
	2020	7,246,757	..	..	..	..	..	..	..	..
	2021	8,523,782	..	..	..	..	..	..	..	..
Cyprus	2018	54	..	..	..	..	..	..	..	3,015
	2019	51	..	..	..	..	..	..	..	3,062
	2020	37	..	..	..	..	..	..	..	3,114
	2021	37	..	..	..	..	..	..	..	3,168

## Production of heat - by type

Terajoules

Country or area	Year	Combustible fuels	Geo-thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Georgia	2018	..	..	..	..	..	..	..	670	129
	2019	..	..	..	..	..	..	..	680	130
	2020	..	..	..	..	..	..	..	588	131
	2021	..	..	..	..	..	..	..	629	141
Israel	2018	..	..	..	..	..	..	..	..	15,100
	2019	..	..	..	..	..	..	..	..	15,100
	2020	..	..	..	..	..	..	..	..	16,379
	2021	..	..	..	..	..	..	..	..	17,090
Japan	2018	13,187	..	..	..	..	7,118	2,462	5,367	8,447
	2019	12,462	..	..	..	..	7,586	2,590	5,367	7,736
	2020	11,673	..	..	..	..	6,508	3,081	5,367	7,063
	2021	11,712	..	..	..	..	6,469	3,081	5,367	6,460
Jordan	2018	..	..	..	..	..	..	..	..	8,961
	2019	..	..	..	..	..	..	..	..	9,098
	2020	..	..	..	..	..	..	..	..	9,131
	2021	..	..	..	..	..	..	..	..	9,224
Kazakhstan	2018	389,432	..	..	..	..	..	..	..	..
	2019	347,364	..	..	..	..	..	..	..	..
	2020	381,860	..	..	..	..	..	..	..	..
	2021	393,611	..	..	..	..	..	..	..	..
Korea, Republic of	2018	250,495	..	..	..	2,172	..	..	8,730	1,880
	2019	236,567	..	..	..	2,170	..	..	9,409	1,848
	2020	236,073	..	..	..	2,164	..	..	10,089	1,812
	2021	235,441	..	..	..	2,160	..	..	10,854	1,781
Kyrgyzstan	2018	13,798	..	..	..	..	..	..	..	..
	2019	12,424	..	..	..	..	..	..	..	..
	2020	13,332	..	..	..	..	..	..	..	..
	2021	13,637	..	..	..	..	..	..	..	..
Lebanon	2018	..	..	..	..	..	..	..	..	*1,060
	2019	..	..	..	..	..	..	..	..	1,060
	2020	..	..	..	..	..	..	..	..	*1,060
	2021	..	..	..	..	..	..	..	..	1,060
Mongolia	2018	52,355	..	..	..	..	..	..	..	..
	2019	55,589	..	..	..	..	..	..	..	..
	2020	59,124	..	..	..	..	..	..	..	..
	2021	59,383	..	..	..	..	..	..	..	..
Nepal	2018	..	..	..	..	..	..	..	..	4,080
	2019	..	..	..	..	..	..	..	..	4,081
	2020	..	..	..	..	..	..	..	..	4,760
	2021	..	..	..	..	..	..	..	..	4,962
Other Asia	2018	99,291	..	..	..	..	..	..	..	4,383
	2019	91,765	..	..	..	..	..	..	..	4,231
	2020	93,319	..	..	..	..	..	..	..	4,372
	2021	99,348	..	..	..	..	..	..	..	3,352
State of Palestine	2018	..	..	5,778	..	..	..	..	..	..
	2019	..	..	5,925	..	..	..	..	..	..
	2020	..	..	6,078	..	..	..	..	..	..
	2021	..	..	6,252	..	..	..	..	..	..
Tajikistan	2018	3,499	..	..	..	..	..	..	..	..
	2019	3,519	..	..	..	..	..	..	..	..
	2020	3,612	..	..	..	..	..	..	..	..
	2021	3,695	..	..	..	..	..	..	..	..

Table 35

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Terajoules

Country or area	Year	Combustible fuels	Geo-thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Thailand	2018	..	..	..	..	..	..	..	..	423
	2019	..	..	..	..	..	..	..	..	423
	2020	..	..	..	..	..	..	..	..	444
	2021	..	..	..	..	..	..	..	..	456
Türkiye	2018	41,613	..	..	..	..	..	15,900	81,810	36,718
	2019	42,991	..	..	..	..	..	17,623	81,810	34,583
	2020	45,601	..	..	..	..	..	21,651	81,810	35,295
	2021	43,364	..	..	..	..	..	21,418	81,819	36,006
Turkmenistan	2018	10,877	..	..	..	..	..	..	..	..
	2019	10,877	..	..	..	..	..	..	..	..
	2020	10,877	..	..	..	..	..	..	..	..
	2021	10,876	..	..	..	..	..	..	..	..
Uzbekistan	2018	*111,018	..	..	..	..	*10,489	..	..	..
	2019	*118,859	..	..	..	..	*14,975	..	..	..
	2020	133,726	..	..	..	..	*14,988	..	..	..
	2021	112,313	..	..	..	..	*11,962	..	..	..
Viet Nam	2018	..	..	..	..	..	..	..	..	..
	2019	..	..	..	..	..	..	..	..	..
	2020	..	..	..	..	..	..	..	..	7
	2021	..	..	..	..	..	..	..	..	7
<b>Europe</b>	<b>2018</b>	<b>8,118,998</b>	<b>50,911</b>	<b>2,304</b>	<b>25,956</b>	<b>63,117</b>	<b>44,844</b>	<b>439,923</b>	<b>25,003</b>	<b>99,947</b>
	<b>2019</b>	<b>7,879,113</b>	<b>51,386</b>	<b>2,498</b>	<b>25,647</b>	<b>69,485</b>	<b>44,352</b>	<b>434,116</b>	<b>26,999</b>	<b>101,110</b>
	<b>2020</b>	<b>7,611,499</b>	<b>49,412</b>	<b>2,880</b>	<b>25,012</b>	<b>43,960</b>	<b>46,642</b>	<b>429,902</b>	<b>26,179</b>	<b>105,039</b>
	<b>2021</b>	<b>8,281,940</b>	<b>50,224</b>	<b>2,507</b>	<b>26,137</b>	<b>45,115</b>	<b>52,680</b>	<b>473,050</b>	<b>27,330</b>	<b>105,443</b>
Albania	2018	122	..	..	..	..	..	..	..	564
	2019	151	..	..	..	..	..	..	..	558
	2020	230	..	..	..	..	..	..	..	563
	2021	247	..	..	..	..	..	..	..	569
Andorra	2018	21	..	..	..	..	..	..	..	..
	2019	37	..	..	..	..	..	..	..	..
	2020	43	..	..	..	..	..	..	..	..
	2021	72	..	..	..	..	..	..	..	..
Austria	2018	83,290	573	93	..	93	30	..	473	7,472
	2019	82,904	470	91	..	91	384	..	476	7,393
	2020	83,277	515	91	..	71	435	..	493	7,518
	2021	90,707	552	97	..	84	656	..	429	7,279
Belarus	2018	260,497	..	..	..	..	..	..	..	..
	2019	247,488	..	..	..	..	..	..	..	..
	2020	243,739	..	..	..	..	..	..	..	..
	2021	261,579	..	..	..	..	..	..	..	..
Belgium	2018	24,092	53	..	..	10,288	..	..	..	1,096
	2019	20,590	56	..	..	9,901	..	..	..	1,089
	2020	20,063	59	..	..	9,970	..	..	..	1,129
	2021	20,647	67	..	..	9,679	..	..	..	1,089
Bosnia and Herzegovina	2018	5,759	..	..	..	..	..	..	..	..
	2019	5,571	..	..	..	..	..	..	..	..
	2020	5,850	..	..	..	..	..	..	..	..
	2021	6,011	..	..	..	..	..	..	..	..
Bulgaria	2018	35,433	..	..	718	1,818	..	..	1,450	1,044
	2019	35,920	..	..	660	2,217	..	..	1,470	1,092
	2020	36,055	..	..	548	2,426	..	..	1,495	1,147
	2021	38,059	..	..	653	2,294	..	..	1,512	1,222

Table 35

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Country or area	Year	Combustible fuels	Geo-thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Croatia	2018	12,698	..	..	..	..	..	..	320	584
	2019	13,182	..	..	..	..	..	..	301	647
	2020	13,851	..	..	..	..	..	..	303	684
	2021	15,553	..	..	..	..	..	..	208	715
Czechia	2018	115,419	..	..	864	706	109	1,135	..	753
	2019	113,717	..	..	853	669	125	1,027	..	767
	2020	110,303	..	..	787	595	116	1,160	..	789
	2021	118,859	..	..	863	581	154	1,039	..	810
Denmark	2018	127,276	55	2,157	..	..	1,490	4,074	..	603
	2019	123,496	34	2,347	..	..	2,019	4,375	..	611
	2020	116,633	23	2,662	..	..	4,271	4,684	..	611
	2021	127,291	27	2,278	..	..	6,743	4,672	..	611
Estonia	2018	24,889	..	..	..	..	..	..	..	..
	2019	21,958	..	..	..	..	..	..	..	..
	2020	20,933	..	..	..	..	..	..	..	..
	2021	22,727	..	..	..	..	..	..	..	..
Finland	2018	170,696	..	..	..	4,446	4,344	10,077	..	83
	2019	165,855	..	..	..	4,567	4,283	10,570	..	91
	2020	149,472	..	..	..	4,241	4,250	13,069	..	100
	2021	168,354	..	..	..	4,144	5,865	15,197	..	110
France	2018	157,398	5,986	..	..	..	963	3,278	1,681	7,583
	2019	164,122	6,481	..	..	..	1,294	4,439	1,681	7,843
	2020	162,296	6,751	..	..	..	1,340	3,868	1,681	8,145
	2021	176,932	7,075	..	..	..	1,660	5,270	1,681	8,454
Germany	2018	460,597	1,333	8	..	..	..	6,133	3,558	31,942
	2019	449,842	1,732	13	..	..	..	6,341	3,390	30,525
	2020	416,246	1,940	41	..	..	10	7,297	3,426	32,016
	2021	460,588	1,928	49	..	..	4	6,950	3,962	30,366
Greece	2018	2,167	..	..	..	..	..	..	371	11,607
	2019	2,203	..	..	..	..	..	..	432	11,968
	2020	2,199	..	..	..	..	..	..	235	12,272
	2021	1,971	..	..	..	..	..	..	181	12,724
Hungary	2018	43,148	2,570	..	620	..	..	2,641	2,761	527
	2019	41,801	2,864	..	585	..	81	3,069	2,832	560
	2020	42,508	2,772	..	504	..	165	2,626	2,609	627
	2021	45,789	2,940	..	388	..	45	3,000	2,873	650
Iceland	2018	18	39,040	..	..	..	924	..	2,081	..
	2019	16	38,442	..	..	..	941	..	2,103	..
	2020	18	36,026	..	..	..	942	..	2,440	..
	2021	15	36,145	..	..	..	830	..	2,946	..
Ireland	2018	..	..	..	..	..	..	..	..	567
	2019	..	..	..	..	..	..	..	..	573
	2020	..	..	..	..	..	..	..	..	589
	2021	..	..	..	..	..	..	..	..	587
Italy	2018	228,673	878	6	..	..	..	..	5,364	9,145
	2019	230,526	870	6	..	..	..	..	5,477	9,544
	2020	228,030	872	8	..	..	..	..	5,014	9,887
	2021	222,664	1,072	10	..	..	..	..	4,815	10,323
Kosovo	2018	45	..	..	..	..	787	..	..	15
	2019	28	..	..	..	..	830	..	..	16
	2020	16	..	..	..	..	961	..	..	16
	2021	17	..	..	..	..	1,059	..	..	17

Table 35

## Production of heat - by type

Terajoules

Country or area	Year	Combustible fuels	Geo-thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Latvia	2018	29,682	..	..	..	..	6	..	..	..
	2019	28,604	..	3	..	..	5	..	..	..
	2020	27,006	..	40	..	..	4	..	..	..
	2021	31,198	..	36	..	..	4	..	..	..
Liechtenstein	2018	417	..	37	..	..	..	..	..	..
	2019	432	..	36	..	..	..	..	..	..
	2020	463	..	36	..	..	..	..	..	..
	2021	483	..	34	..	..	..	..	..	..
Lithuania	2018	34,623	..	..	..	11,272	9	..	..	..
	2019	31,735	..	..	..	11,034	9	..	..	..
	2020	29,752	..	..	..	8,160	7	..	..	..
	2021	35,903	..	..	..	8,663	10	..	..	..
Luxembourg	2018	3,115	..	0	..	..	..	..	..	97
	2019	4,033	..	0	..	..	..	..	..	101
	2020	5,646	..	0	..	..	..	..	..	107
	2021	6,176	..	0	..	..	..	..	..	113
Malta	2018	0	..	..	..	..	..	..	..	211
	2019	1	..	..	..	..	..	..	..	212
	2020	..	..	..	..	..	..	..	..	214
	2021	..	..	..	..	..	..	..	..	218
Netherlands (Kingd. of the)	2018	101,825	..	..	..	8,047	..	1,115	3,731	1,156
	2019	104,847	..	..	..	9,033	..	..	5,564	1,180
	2020	93,458	..	..	..	12,586	..	..	6,185	1,176
	2021	98,593	..	..	..	12,418	..	..	6,327	1,164
North Macedonia	2018	2,051	..	..	..	..	..	..	190	..
	2019	2,057	..	..	..	..	..	..	187	..
	2020	2,533	..	..	..	..	..	..	185	..
	2021	2,678	..	..	..	..	..	..	179	121
Norway	2018	17,827	..	..	..	3,648	5,023	713	..	..
	2019	18,418	..	..	..	3,581	4,824	763	..	..
	2020	16,409	..	..	..	3,154	5,023	756	..	..
	2021	20,363	..	..	..	4,178	5,461	997	..	..
Poland	2018	294,097	..	..	..	457	5	115	991	2,383
	2019	286,234	..	..	..	528	3	286	1,050	3,009
	2020	285,225	..	..	..	456	5	189	1,073	3,355
	2021	307,313	..	..	..	774	5	280	1,189	3,566
Portugal	2018	20,180	..	..	..	..	..	..	73	3,953
	2019	20,927	..	..	..	..	..	..	72	4,033
	2020	20,546	..	..	..	..	..	..	55	4,216
	2021	16,673	..	..	..	..	..	..	57	4,416
Republic of Moldova	2018	10,658	..	..	..	..	..	..	..	..
	2019	9,670	..	..	..	..	..	..	..	..
	2020	9,365	..	..	..	..	..	..	..	..
	2021	10,518	..	..	..	..	..	..	..	..
Romania	2018	71,225	246	..	..	..	..	..	1,066	31
	2019	61,203	243	..	..	..	..	..	1,045	30
	2020	58,834	255	..	..	..	..	..	245	32
	2021	60,983	261	..	..	..	..	..	378	49
Russian Federation	2018	5,064,879	0	..	14,011	..	14,646	388,539	..	..
	2019	4,914,229	..	..	14,246	..	13,209	380,746	..	..
	2020	4,714,085	..	..	14,097	..	10,800	374,896	..	..
	2021	5,179,115	..	..	14,595	..	12,935	411,892	..	..

Table 35

## Production of heat - by type

Terajoules

Country or area	Year	Combustible fuels	Geo-thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Serbia	2018	35,536	..	..	..	..	..	..	214	..
	2019	32,945	..	..	..	..	..	..	219	..
	2020	35,957	..	..	..	..	..	..	212	..
	2021	37,209	..	..	..	..	..	..	63	..
Slovakia	2018	29,113	159	2	1,917	..	107	17	58	297
	2019	29,079	175	2	1,882	..	119	14	58	316
	2020	28,617	181	2	1,848	..	78	16	30	334
	2021	30,233	136	2	2,009	..	71	18	30	358
Slovenia	2018	9,296	19	..	..	..	..	..	560	443
	2019	9,124	19	..	..	..	..	..	582	443
	2020	9,266	19	..	..	..	..	..	439	430
	2021	10,064	21	..	..	..	..	..	452	426
Spain	2018	..	..	..	..	..	..	..	8	12,563
	2019	..	..	..	..	..	..	..	8	13,170
	2020	..	..	..	..	..	..	..	8	13,716
	2021	..	..	..	..	..	..	..	8	14,116
Sweden	2018	173,343	..	..	..	..	16,366	20,707	..	457
	2019	170,111	..	..	..	..	16,175	21,301	..	446
	2020	154,890	..	..	..	..	18,191	20,354	..	436
	2021	184,605	..	..	..	..	17,133	22,749	..	425
Switzerland	2018	20,340	..	..	1,350	..	13	..	18	2,565
	2019	22,743	..	..	1,380	..	..	..	18	2,642
	2020	22,559	..	..	1,420	..	..	..	17	2,659
	2021	24,300	..	..	1,520	..	..	..	6	2,662
Ukraine	2018	381,170	..	..	6,476	22,342	22	1,379	..	..
	2019	346,992	..	..	6,041	27,865	52	1,185	..	..
	2020	378,863	..	..	5,809	2,300	45	986	..	..
	2021	380,841	..	..	6,109	2,300	45	986	..	..
United Kingdom	2018	67,381	..	..	..	..	..	..	34	2,208
	2019	66,323	..	..	..	..	..	..	34	2,250
	2020	66,263	..	..	..	..	..	..	34	2,268
	2021	66,611	..	..	..	..	..	..	34	2,283
<b>Latin America &amp; Carib.</b>	<b>2018</b>	..	..	..	..	..	..	..	<b>102</b>	<b>16,433</b>
	<b>2019</b>	..	..	..	..	..	..	..	<b>102</b>	<b>18,197</b>
	<b>2020</b>	..	..	..	..	..	..	..	<b>102</b>	<b>20,714</b>
	<b>2021</b>	..	..	..	..	<b>2,103</b>	..	..	<b>102</b>	<b>60,602</b>
Brazil	2018	..	..	..	..	..	..	..	..	..
	2019	..	..	..	..	..	..	..	..	..
	2020	..	..	..	..	..	..	..	..	..
	2021	..	..	..	..	2,103	..	..	..	38,939
Chile	2018	..	..	..	..	..	..	..	..	2,465
	2019	..	..	..	..	..	..	..	..	2,919
	2020	..	..	..	..	..	..	..	..	2,919
	2021	..	..	..	..	..	..	..	..	3,051
Ecuador	2018	..	..	..	..	..	..	..	*102	..
	2019	..	..	..	..	..	..	..	*102	..
	2020	..	..	..	..	..	..	..	*102	..
	2021	..	..	..	..	..	..	..	*102	..
Mexico	2018	..	..	..	..	..	..	..	..	12,531
	2019	..	..	..	..	..	..	..	..	13,796
	2020	..	..	..	..	..	..	..	..	16,280
	2021	..	..	..	..	..	..	..	..	17,083

Table 35

## Production of heat - by type

Terajoules

Country or area	Year	Combustible fuels	Geo-thermal	Solar thermal	Nuclear	Chemical sources	Heat pumps and electric boilers	Other sources	Direct use geothermal	Direct use solar thermal
Peru	2018	..	..	..	..	..	..	..	..	1,436
	2019	..	..	..	..	..	..	..	..	1,482
	2020	..	..	..	..	..	..	..	..	1,515
	2021	..	..	..	..	..	..	..	..	1,529
Northern America	<b>2018</b>	<b>503,470</b>	..	..	..	..	<b>576</b>	..	<b>43,934</b>	<b>105,911</b>
	<b>2019</b>	<b>485,336</b>	..	..	..	..	<b>576</b>	..	<b>14,096</b>	<b>114,732</b>
	<b>2020</b>	<b>480,488</b>	..	..	..	..	<b>600</b>	..	<b>13,057</b>	<b>117,616</b>
	<b>2021</b>	<b>454,120</b>	..	..	..	..	<b>600</b>	..	<b>13,964</b>	<b>124,696</b>
Canada	2018	25,523	..	..	..	..	..	..	..	1,810
	2019	22,258	..	..	..	..	..	..	..	1,810
	2020	22,456	..	..	..	..	..	..	..	1,782
	2021	23,103	..	..	..	..	..	..	..	1,782
Greenland	2018	*625	..	..	..	..	*576	..	..	..
	2019	*625	..	..	..	..	*576	..	..	..
	2020	*700	..	..	..	..	*600	..	..	..
	2021	*700	..	..	..	..	*600	..	..	..
St. Pierre-Miquelon	2018	..	..	..	..	..	..	..	..	..
	2019	32	..	..	..	..	..	..	..	..
	2020	36	..	..	..	..	..	..	..	..
	2021	42	..	..	..	..	..	..	..	..
United States	2018	477,322	..	..	..	..	..	..	43,934	104,101
	2019	462,421	..	..	..	..	..	..	14,096	112,922
	2020	457,296	..	..	..	..	..	..	13,057	115,834
	2021	430,274	..	..	..	..	..	..	13,964	122,914
Oceania	<b>2018</b>	..	..	..	..	..	..	<b>1,267</b>	<b>7,916</b>	<b>17,279</b>
	<b>2019</b>	..	..	..	..	..	..	<b>1,167</b>	<b>7,940</b>	<b>18,190</b>
	<b>2020</b>	..	..	..	..	..	..	<b>1,016</b>	<b>7,770</b>	<b>19,038</b>
	<b>2021</b>	..	..	..	..	..	..	<b>1,107</b>	<b>7,386</b>	<b>20,266</b>
Australia	2018	..	..	..	..	..	..	..	..	16,693
	2019	..	..	..	..	..	..	..	..	17,603
	2020	..	..	..	..	..	..	..	..	18,449
	2021	..	..	..	..	..	..	..	..	19,675
French Polynesia	2018	..	..	..	..	..	..	..	..	78
	2019	..	..	..	..	..	..	..	..	80
	2020	..	..	..	..	..	..	..	..	81
	2021	..	..	..	..	..	..	..	..	83
New Caledonia	2018	..	..	..	..	..	..	..	..	141
	2019	..	..	..	..	..	..	..	..	141
	2020	..	..	..	..	..	..	..	..	141
	2021	..	..	..	..	..	..	..	..	141
New Zealand	2018	..	..	..	..	..	..	1,267	7,916	364
	2019	..	..	..	..	..	..	1,167	7,940	364
	2020	..	..	..	..	..	..	1,016	7,770	364
	2021	..	..	..	..	..	..	1,107	7,386	364
Samoa	2018	..	..	..	..	..	..	..	..	*3
	2019	..	..	..	..	..	..	..	..	*3
	2020	..	..	..	..	..	..	..	..	*3
	2021	..	..	..	..	..	..	..	..	*3