

**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.

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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
<b>World</b>	<b>2020</b>	<b>16,376,496</b>	<b>49,412</b>	<b>8,921</b>	<b>25,012</b>	<b>63,648</b>	<b>67,481</b>	<b>455,397</b>	<b>145,053</b>	<b>405,708</b>
	<b>2021</b>	<b>18,176,360</b>	<b>50,224</b>	<b>8,835</b>	<b>26,137</b>	<b>66,485</b>	<b>70,950</b>	<b>499,017</b>	<b>147,548</b>	<b>464,331</b>
	<b>2022</b>	<b>19,051,273</b>	<b>50,492</b>	<b>9,467</b>	<b>24,071</b>	<b>60,704</b>	<b>69,586</b>	<b>471,788</b>	<b>150,574</b>	<b>489,081</b>
	<b>2023</b>	<b>19,978,679</b>	<b>51,738</b>	<b>9,408</b>	<b>23,082</b>	<b>55,347</b>	<b>88,566</b>	<b>502,833</b>	<b>188,383</b>	<b>514,296</b>
<b>Africa</b>	<b>2020</b>	..	..	..	..	<b>17,692</b>	..	..	..	<b>7,885</b>
	<b>2021</b>	..	..	..	..	<b>17,714</b>	..	..	..	<b>11,262</b>
	<b>2022</b>	..	..	..	..	<b>17,590</b>	..	..	..	<b>11,464</b>
	<b>2023</b>	..	..	..	..	<b>17,139</b>	..	..	..	<b>11,540</b>
Botswana	2020	..	..	..	..	..	..	..	..	55
	2021	..	..	..	..	..	..	..	..	63
	2022	..	..	..	..	..	..	..	..	68
	2023	..	..	..	..	..	..	..	..	68
Morocco	2020	..	..	..	..	*14,063	..	..	..	..
	2021	..	..	..	..	*14,063	..	..	..	3,035
	2022	..	..	..	..	*14,063	..	..	..	3,142
	2023	..	..	..	..	*14,063	..	..	..	3,248
Namibia	2020	..	..	..	..	..	..	..	..	177
	2021	..	..	..	..	..	..	..	..	191
	2022	..	..	..	..	..	..	..	..	204
	2023	..	..	..	..	..	..	..	..	204
Senegal	2020	..	..	..	..	469	..	..	..	..
	2021	..	..	..	..	392	..	..	..	..
	2022	..	..	..	..	392	..	..	..	..
	2023	..	..	..	..	392	..	..	..	..
South Africa	2020	..	..	..	..	..	..	..	..	4,979
	2021	..	..	..	..	..	..	..	..	5,214
	2022	..	..	..	..	..	..	..	..	5,313
	2023	..	..	..	..	..	..	..	..	5,352
Tunisia	2020	..	..	..	..	3,160	..	..	..	2,673
	2021	..	..	..	..	3,259	..	..	..	2,759
	2022	..	..	..	..	3,135	..	..	..	2,737
	2023	..	..	..	..	2,683	..	..	..	2,668
<b>Asia</b>	<b>2020</b>	<b>8,283,534</b>	..	<b>6,078</b>	..	<b>2,164</b>	<b>21,519</b>	<b>24,737</b>	<b>97,857</b>	<b>135,045</b>
	<b>2021</b>	<b>9,568,886</b>	..	<b>6,252</b>	..	<b>2,160</b>	<b>18,394</b>	<b>24,529</b>	<b>98,670</b>	<b>141,726</b>
	<b>2022</b>	<b>10,866,870</b>	..	<b>6,418</b>	..	<b>1,744</b>	<b>18,721</b>	<b>24,108</b>	<b>99,339</b>	<b>145,162</b>
	<b>2023</b>	<b>11,806,010</b>	..	<b>6,486</b>	..	<b>2,074</b>	<b>18,533</b>	<b>21,397</b>	<b>136,345</b>	<b>152,242</b>
Armenia	2020	38	..	..	..	..	..	..	..	600
	2021	11	..	..	..	..	..	..	..	651
	2022	..	..	..	..	..	..	..	..	705
	2023	..	..	..	..	..	..	..	..	673
Azerbaijan	2020	13,661	..	..	..	..	2	..	..	..
	2021	14,678	..	..	..	..	8	..	..	..
	2022	14,104	..	..	..	..	22	..	..	..
	2023	15,175	..	..	..	..	21	..	..	..
China	2020	7,246,757	..	..	..	..	..	..	..	..
	2021	8,523,782	..	..	..	..	..	..	..	..
	2022	9,843,350	..	..	..	..	..	..	..	..
	2023	10,804,581	..	..	..	..	..	..	..	..
Cyprus	2020	37	..	..	..	..	..	..	..	3,114
	2021	37	..	..	..	..	..	..	..	3,168
	2022	40	..	..	..	..	..	..	..	3,218
	2023	36	..	..	..	..	..	..	..	3,264

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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
Georgia	2020	..	..	..	..	..	..	..	591	131
	2021	..	..	..	..	..	..	..	629	141
	2022	..	..	..	..	..	..	..	637	152
	2023	..	..	..	..	..	..	..	638	163
India	2020	..	..	..	..	..	..	..	..	51,898
	2021	..	..	..	..	..	..	..	..	58,129
	2022	..	..	..	..	..	..	..	..	60,285
	2023	..	..	..	..	..	..	..	..	67,052
Israel	2020	..	..	..	..	..	..	..	..	16,379
	2021	..	..	..	..	..	..	..	..	17,090
	2022	..	..	..	..	..	..	..	..	17,463
	2023	..	..	..	..	..	..	..	..	18,083
Japan	2020	18,948	..	..	..	..	6,529	3,086	5,367	7,063
	2021	18,607	..	..	..	..	6,424	3,111	5,367	6,460
	2022	18,397	..	..	..	..	7,774	3,145	5,367	5,961
	2023	18,593	..	..	..	..	8,736	3,145	5,367	5,456
Jordan	2020	..	..	..	..	..	..	..	..	8,110
	2021	..	..	..	..	..	..	..	..	8,340
	2022	..	..	..	..	..	..	..	..	8,570
	2023	..	..	..	..	..	..	..	..	8,801
Kazakhstan	2020	381,860	..	..	..	..	..	..	..	..
	2021	393,611	..	..	..	..	..	..	..	..
	2022	394,765	..	..	..	..	..	..	..	..
	2023	386,229	..	..	..	..	..	..	..	..
Korea, Republic of	2020	261,085	..	..	..	2,164	..	..	10,089	1,812
	2021	272,965	..	..	..	2,160	..	..	10,854	1,781
	2022	263,437	..	..	..	1,744	..	..	11,515	1,748
	2023	269,583	..	..	..	2,074	..	..	11,522	1,749
Kyrgyzstan	2020	13,332	..	..	..	..	..	..	..	..
	2021	13,637	..	..	..	..	..	..	..	..
	2022	13,515	..	..	..	..	..	..	..	..
	2023	12,717	..	..	..	..	..	..	..	..
Lebanon	2020	..	..	..	..	..	..	..	..	*1,060
	2021	..	..	..	..	..	..	..	..	*1,060
	2022	..	..	..	..	..	..	..	..	*1,060
	2023	..	..	..	..	..	..	..	..	*1,060
Mongolia	2020	59,124	..	..	..	..	..	..	..	..
	2021	59,383	..	..	..	..	..	..	..	..
	2022	62,688	..	..	..	..	..	..	..	..
	2023	65,494	..	..	..	..	..	..	..	..
Nepal	2020	..	..	..	..	..	..	..	..	4,760
	2021	..	..	..	..	..	..	..	..	5,083
	2022	..	..	..	..	..	..	..	..	5,182
	2023	..	..	..	..	..	..	..	..	5,283
Other Asia	2020	93,318	..	..	..	..	..	..	..	4,372
	2021	99,094	..	..	..	..	..	..	..	3,352
	2022	88,305	..	..	..	..	..	..	..	3,985
	2023	78,690	..	..	..	..	..	..	..	3,903
State of Palestine	2020	..	..	6,078	..	..	..	..	..	..
	2021	..	..	6,252	..	..	..	..	..	..
	2022	..	..	6,418	..	..	..	..	..	..
	2023	..	..	6,486	..	..	..	..	..	..

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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
Tajikistan	2020	3,612	..	..	..	..	..	..	..	..
	2021	3,695	..	..	..	..	..	..	..	..
	2022	3,695	..	..	..	..	..	..	..	..
	2023	3,076	..	..	..	..	..	..	..	..
Thailand	2020	..	..	..	..	..	..	..	..	444
	2021	..	..	..	..	..	..	..	..	456
	2022	..	..	..	..	..	..	..	..	458
	2023	..	..	..	..	..	..	..	..	377
Türkiye	2020	45,601	..	..	..	..	..	21,651	81,810	35,295
	2021	43,364	..	..	..	..	..	21,418	81,819	36,006
	2022	39,327	..	..	..	..	..	20,963	81,819	36,367
	2023	33,794	..	..	..	..	..	18,251	118,818	36,367
Turkmenistan	2020	12,436	..	..	..	..	..	..	..	..
	2021	13,708	..	..	..	..	..	..	..	..
	2022	15,736	..	..	..	..	..	..	..	..
	2023	15,736	..	..	..	..	..	..	..	..
Uzbekistan	2020	133,726	..	..	..	..	*14,988	..	..	..
	2021	112,313	..	..	..	..	*11,962	..	..	..
	2022	109,512	..	..	..	..	*10,926	..	..	..
	2023	102,307	..	..	..	..	*9,776	..	..	..
Viet Nam	2020	..	..	..	..	..	..	..	..	7
	2021	..	..	..	..	..	..	..	..	7
	2022	..	..	..	..	..	..	..	..	7
	2023	..	..	..	..	..	..	..	..	11
<b>Europe</b>	<b>2020</b>	<b>7,611,421</b>	<b>49,412</b>	<b>2,843</b>	<b>25,012</b>	<b>43,792</b>	<b>45,362</b>	<b>429,644</b>	<b>26,179</b>	<b>105,151</b>
	<b>2021</b>	<b>8,151,343</b>	<b>50,224</b>	<b>2,584</b>	<b>26,137</b>	<b>44,508</b>	<b>51,957</b>	<b>473,381</b>	<b>27,339</b>	<b>105,820</b>
	<b>2022</b>	<b>7,739,743</b>	<b>50,492</b>	<b>3,048</b>	<b>24,071</b>	<b>37,327</b>	<b>50,265</b>	<b>446,660</b>	<b>28,864</b>	<b>112,869</b>
	<b>2023</b>	<b>7,729,566</b>	<b>51,738</b>	<b>2,922</b>	<b>23,082</b>	<b>31,289</b>	<b>69,434</b>	<b>480,597</b>	<b>29,113</b>	<b>112,075</b>
Albania	2020	..	..	..	..	..	..	..	..	564
	2021	..	..	..	..	..	..	..	..	569
	2022	..	..	..	..	..	..	..	..	624
	2023	..	..	..	..	..	..	..	..	636
Andorra	2020	43	..	..	..	..	..	..	..	..
	2021	72	..	..	..	..	..	..	..	..
	2022	111	..	..	..	..	..	..	..	..
	2023	133	..	..	..	..	..	..	..	..
Austria	2020	83,277	515	91	..	71	435	..	493	7,518
	2021	90,957	552	97	..	84	705	..	429	7,289
	2022	81,890	688	122	..	72	364	..	360	7,329
	2023	78,385	582	129	..	55	358	..	324	7,042
Belarus	2020	243,739	..	..	..	..	..	..	..	..
	2021	261,579	..	..	..	..	..	..	..	..
	2022	248,681	..	..	..	..	..	..	..	..
	2023	248,583	..	..	..	..	..	..	..	..
Belgium	2020	20,006	59	..	..	9,970	..	..	..	1,129
	2021	20,613	67	..	..	9,679	..	..	..	1,089
	2022	17,865	63	..	..	9,431	..	..	..	1,168
	2023	15,475	71	..	..	7,325	..	..	..	1,105
Bosnia and Herzegovina	2020	5,850	..	..	..	..	..	..	..	..
	2021	6,011	..	..	..	..	..	..	..	..
	2022	5,728	..	..	..	..	..	..	..	..
	2023	5,735	..	..	..	..	..	..	..	..

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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
Bulgaria	2020	36,055	..	..	548	2,426	..	..	1,495	1,147
	2021	38,059	..	..	653	2,294	..	..	1,512	1,222
	2022	33,296	..	..	608	2,503	..	..	1,532	1,341
	2023	32,463	..	..	517	2,579	..	..	1,554	1,392
Croatia	2020	13,851	..	..	..	..	..	..	303	684
	2021	15,553	..	..	..	..	..	..	208	715
	2022	14,414	..	..	..	..	..	..	198	672
	2023	13,881	..	..	..	..	..	..	174	689
Czechia	2020	110,303	..	..	787	595	116	1,160	..	789
	2021	118,789	..	..	863	581	154	1,039	..	810
	2022	107,610	..	..	866	526	166	1,019	..	838
	2023	98,397	..	..	1,126	132	196	938	..	868
Denmark	2020	116,657	23	2,661	..	..	3,632	5,412	..	611
	2021	127,041	27	2,370	..	..	5,747	5,833	..	559
	2022	114,969	41	2,788	..	..	6,059	5,251	..	642
	2023	116,004	35	2,621	..	..	10,606	4,946	..	602
Estonia	2020	20,933	..	..	..	..	..	..	..	..
	2021	22,727	..	..	..	..	..	..	..	..
	2022	23,785	..	..	..	..	..	..	..	..
	2023	23,921	..	..	..	..	..	..	..	..
Finland	2020	149,472	..	..	..	4,241	4,250	13,069	..	100
	2021	168,978	..	..	..	4,144	5,865	15,197	..	110
	2022	162,012	..	..	..	3,928	5,541	13,266	..	110
	2023	152,756	..	..	..	3,785	10,227	15,940	..	110
France	2020	162,498	6,751	..	..	..	1,340	3,868	1,681	9,033
	2021	177,307	7,075	..	..	..	1,660	5,270	1,681	9,411
	2022	169,605	6,302	..	..	..	2,447	4,980	1,681	9,862
	2023	155,872	6,400	..	..	..	2,757	6,115	1,681	10,223
Germany	2020	416,246	1,940	41	..	..	10	7,297	3,426	32,016
	2021	460,506	1,928	68	..	..	11	7,106	3,963	30,716
	2022	420,962	3,021	88	..	..	180	5,020	3,901	34,957
	2023	400,594	2,799	125	..	..	179	5,792	4,009	32,727
Greece	2020	2,199	..	..	..	..	..	..	235	12,272
	2021	1,971	..	..	..	..	..	..	181	12,724
	2022	1,507	..	..	..	..	..	..	332	13,381
	2023	1,390	..	..	..	..	..	..	316	14,118
Hungary	2020	42,508	2,772	..	504	..	165	2,626	2,609	627
	2021	45,789	2,940	..	388	..	45	3,000	2,881	650
	2022	40,409	3,133	..	378	..	129	2,889	3,343	669
	2023	36,944	3,080	..	363	..	219	2,442	3,575	736
Iceland	2020	18	36,026	..	..	..	942	..	2,440	..
	2021	15	36,145	..	..	..	830	..	2,946	..
	2022	99	35,707	..	..	..	709	..	3,413	..
	2023	439	37,303	..	..	..	529	..	3,517	..
Ireland	2020	..	..	..	..	..	..	..	..	589
	2021	..	..	..	..	..	..	..	..	587
	2022	..	..	..	..	..	..	..	..	589
	2023	..	..	..	..	..	..	..	..	590
Italy	2020	228,030	872	8	..	..	..	..	5,014	9,887
	2021	91,776	1,072	10	..	..	..	..	4,815	10,323
	2022	84,279	1,074	9	..	..	136	511	4,591	11,010
	2023	84,361	1,021	13	..	..	108	1,043	4,515	11,597

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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
Kosovo	2020	16	..	..	..	..	961	..	..	16
	2021	17	..	..	..	..	1,059	..	..	17
	2022	17	..	..	..	..	1,044	..	..	15
	2023	15	..	..	..	..	1,107	..	..	15
Latvia	2020	27,006	..	40	..	..	4	..	..	..
	2021	31,198	..	36	..	..	4	..	..	..
	2022	27,778	..	39	..	..	3	..	..	..
	2023	25,770	..	31	..	..	1	..	..	..
Liechtenstein	2020	..	..	..	..	..	..	..	..	36
	2021	..	..	..	..	..	..	..	..	34
	2022	..	..	..	..	..	..	..	..	33
	2023	..	..	..	..	..	..	..	..	32
Lithuania	2020	29,752	..	..	..	8,160	7	..	..	..
	2021	35,903	..	..	..	8,663	10	..	..	..
	2022	32,758	..	..	..	3,615	9	..	..	..
	2023	31,741	..	..	..	2,948	8	..	..	..
Luxembourg	2020	5,646	..	0	..	..	..	..	..	100
	2021	6,122	..	0	..	..	..	..	..	104
	2022	5,405	..	0	..	..	313	..	..	106
	2023	5,051	..	0	..	..	337	..	..	109
Malta	2020	..	..	..	..	..	..	..	..	214
	2021	..	..	..	..	..	..	..	..	151
	2022	..	..	..	..	..	..	..	..	134
	2023	..	..	..	..	..	..	..	..	121
Netherlands (Kingd. of the)	2020	93,695	..	..	..	12,419	..	..	6,185	1,176
	2021	98,964	..	..	..	11,811	..	..	6,327	1,164
	2022	92,580	..	..	..	10,773	..	..	6,798	1,168
	2023	85,268	..	..	..	8,031	..	..	6,798	1,176
North Macedonia	2020	2,533	..	..	..	..	..	..	185	..
	2021	2,678	..	..	..	..	..	..	179	121
	2022	2,068	..	..	..	..	..	..	168	121
	2023	2,076	..	..	..	..	..	..	160	129
Norway	2020	16,409	..	..	..	3,154	5,023	756	..	..
	2021	20,363	..	..	..	4,178	5,461	997	..	..
	2022	20,253	..	..	..	5,064	4,244	958	..	..
	2023	21,672	..	..	..	5,015	5,614	984	..	..
Poland	2020	285,225	..	..	..	456	5	189	1,073	3,355
	2021	307,313	..	..	..	774	5	280	1,189	3,566
	2022	285,600	..	..	..	495	5	258	1,318	3,801
	2023	267,878	..	..	..	500	4	200	1,372	3,424
Portugal	2020	20,546	..	..	..	..	..	..	55	4,216
	2021	16,673	..	..	..	..	..	..	57	4,416
	2022	11,538	..	..	..	..	..	..	75	4,628
	2023	9,695	..	..	..	..	..	..	79	4,810
Republic of Moldova	2020	9,365	..	..	..	..	..	..	..	..
	2021	10,518	..	..	..	..	..	..	..	..
	2022	8,848	..	..	..	..	..	..	..	..
	2023	8,448	..	..	..	..	..	..	..	..
Romania	2020	58,834	255	..	..	..	..	..	245	32
	2021	60,983	261	..	..	..	..	..	378	49
	2022	50,982	266	..	..	..	..	..	473	33
	2023	48,005	262	..	..	..	..	..	336	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
Russian Federation	2020	4,714,085	..	..	14,097	..	10,150	374,896	..	..
	2021	5,179,115	..	..	14,595	..	12,156	411,892	..	..
	2022	5,087,802	..	..	14,595	..	12,156	391,861	..	..
	2023	5,191,212	..	..	14,179	..	15,922	399,826	..	..
Serbia	2020	36,053	..	..	..	..	..	..	212	..
	2021	37,537	..	..	..	..	..	..	63	..
	2022	33,504	..	..	..	..	..	..	63	..
	2023	33,236	..	..	..	..	..	..	61	..
Slovakia	2020	28,617	181	2	1,848	..	87	16	30	334
	2021	30,233	136	2	2,009	..	81	18	30	358
	2022	26,524	174	2	1,836	..	108	16	30	380
	2023	24,384	167	2	1,783	..	115	115	32	401
Slovenia	2020	9,266	19	..	..	..	..	..	439	397
	2021	10,064	21	..	..	..	..	..	452	350
	2022	8,921	21	..	..	..	..	..	532	302
	2023	8,175	18	..	..	..	..	..	545	252
Spain	2020	..	..	..	..	..	..	..	8	13,716
	2021	..	..	..	..	..	..	..	8	14,116
	2022	..	..	..	..	..	..	..	8	14,408
	2023	..	..	..	..	..	..	..	8	14,643
Sweden	2020	154,890	..	..	..	..	18,191	20,354	..	436
	2021	184,605	..	..	..	..	17,133	22,749	..	425
	2022	172,599	..	..	..	..	15,635	20,631	..	410
	2023	155,481	..	..	..	..	20,131	42,257	..	399
Switzerland	2020	22,673	..	..	1,420	..	..	..	17	2,659
	2021	24,311	..	..	1,520	..	..	..	6	2,662
	2022	22,608	..	..	1,390	..	..	..	14	2,650
	2023	24,513	..	..	1,430	..	..	..	21	2,628
Ukraine	2020	378,863	..	..	5,809	2,300	45	..	..	..
	2021	380,840	..	..	6,109	2,300	1,031	..	..	..
	2022	257,830	..	..	4,398	920	1,016	..	..	..
	2023	257,830	..	..	3,684	920	1,016	..	..	..
United Kingdom	2020	66,263	..	..	..	..	..	..	34	1,497
	2021	66,163	..	..	..	..	..	..	34	1,512
	2022	64,907	..	..	..	..	..	..	34	1,488
	2023	63,780	..	..	..	..	..	..	34	1,465
<b>Latin America &amp; Carib.</b>	<b>2020</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>102</b>	<b>21,022</b>
	<b>2021</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>2,103</b>	<b>..</b>	<b>..</b>	<b>102</b>	<b>60,970</b>
	<b>2022</b>	<b>8</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>4,042</b>	<b>..</b>	<b>..</b>	<b>102</b>	<b>64,916</b>
	<b>2023</b>	<b>12</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>4,592</b>	<b>..</b>	<b>..</b>	<b>103</b>	<b>73,231</b>
Brazil	2020	..	..	..	..	..	..	..	..	..
	2021	..	..	..	..	2,103	..	..	..	38,939
	2022	..	..	..	..	4,042	..	..	..	41,877
	2023	..	..	..	..	4,592	..	..	..	44,942
Chile	2020	..	..	..	..	..	..	..	..	2,919
	2021	..	..	..	..	..	..	..	..	3,051
	2022	..	..	..	..	..	..	..	..	3,051
	2023	..	..	..	..	..	..	..	..	3,578
Dominican Republic	2020	..	..	..	..	..	..	..	..	305
	2021	..	..	..	..	..	..	..	..	310
	2022	..	..	..	..	..	..	..	..	313
	2023	..	..	..	..	..	..	..	..	316

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
Ecuador	2020	..	..	..	..	..	..	..	*102	..
	2021	..	..	..	..	..	..	..	*102	..
	2022	..	..	..	..	..	..	..	102	..
	2023	..	..	..	..	..	..	..	103	..
Mexico	2020	..	..	..	..	..	..	..	..	16,280
	2021	..	..	..	..	..	..	..	..	17,083
	2022	..	..	..	..	..	..	..	..	18,066
	2023	..	..	..	..	..	..	..	..	22,740
Peru	2020	..	..	..	..	..	..	..	..	1,515
	2021	..	..	..	..	..	..	..	..	1,583
	2022	..	..	..	..	..	..	..	..	1,604
	2023	..	..	..	..	..	..	..	..	1,649
Saint Barthélemy	2020	..	..	..	..	..	..	..	..	..
	2021	..	..	..	..	..	..	..	..	..
	2022	*8	..	..	..	..	..	..	..	..
	2023	*12	..	..	..	..	..	..	..	..
United States Virgin Is.	2020	..	..	..	..	..	..	..	..	*4
	2021	..	..	..	..	..	..	..	..	*5
	2022	..	..	..	..	..	..	..	..	*5
	2023	..	..	..	..	..	..	..	..	*5
<b>Northern America</b>	<b>2020</b>	<b>481,541</b>	..	..	..	..	<b>600</b>	..	<b>13,057</b>	<b>117,616</b>
	<b>2021</b>	<b>456,131</b>	..	..	..	..	<b>600</b>	..	<b>13,964</b>	<b>124,362</b>
	<b>2022</b>	<b>444,652</b>	..	..	..	..	<b>600</b>	..	<b>14,879</b>	<b>132,679</b>
	<b>2023</b>	<b>443,092</b>	..	..	..	..	<b>600</b>	..	<b>15,372</b>	<b>141,116</b>
Canada	2020	23,509	..	..	..	..	..	..	..	1,782
	2021	25,114	..	..	..	..	..	..	..	1,448
	2022	25,002	..	..	..	..	..	..	..	1,397
	2023	25,754	..	..	..	..	..	..	..	1,397
Greenland	2020	*700	..	..	..	..	*600	..	..	..
	2021	*700	..	..	..	..	*600	..	..	..
	2022	*700	..	..	..	..	*600	..	..	..
	2023	*700	..	..	..	..	*600	..	..	..
St. Pierre-Miquelon	2020	36	..	..	..	..	..	..	..	..
	2021	42	..	..	..	..	..	..	..	..
	2022	*48	..	..	..	..	..	..	..	..
	2023	44	..	..	..	..	..	..	..	..
United States	2020	457,296	..	..	..	..	..	..	13,057	115,834
	2021	430,274	..	..	..	..	..	..	13,964	122,914
	2022	418,901	..	..	..	..	..	..	14,879	131,282
	2023	416,594	..	..	..	..	..	..	15,372	139,719
<b>Oceania</b>	<b>2020</b>	..	..	..	..	..	..	<b>1,016</b>	<b>7,858</b>	<b>18,989</b>
	<b>2021</b>	..	..	..	..	..	..	<b>1,107</b>	<b>7,473</b>	<b>20,191</b>
	<b>2022</b>	..	..	..	..	..	..	<b>1,020</b>	<b>7,390</b>	<b>21,992</b>
	<b>2023</b>	..	..	..	..	<b>254</b>	..	<b>839</b>	<b>7,449</b>	<b>24,092</b>
Australia	2020	..	..	..	..	..	..	..	..	18,400
	2021	..	..	..	..	..	..	..	..	19,600
	2022	..	..	..	..	..	..	..	..	21,400
	2023	..	..	..	..	..	..	..	..	23,500
French Polynesia	2020	..	..	..	..	..	..	..	..	81
	2021	..	..	..	..	..	..	..	..	83
	2022	..	..	..	..	..	..	..	..	84
	2023	..	..	..	..	..	..	..	..	84

## 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
New Caledonia	2020	..	..	..	..	..	..	..	..	141
	2021	..	..	..	..	..	..	..	..	141
	2022	..	..	..	..	..	..	..	..	141
	2023	..	..	..	..	254	..	..	..	141
New Zealand	2020	..	..	..	..	..	..	1,016	7,858	364
	2021	..	..	..	..	..	..	1,107	7,473	364
	2022	..	..	..	..	..	..	1,020	7,390	364
	2023	..	..	..	..	..	..	839	7,449	364
Samoa	2020	..	..	..	..	..	..	..	..	*3
	2021	..	..	..	..	..	..	..	..	*3
	2022	..	..	..	..	..	..	..	..	*3
	2023	..	..	..	..	..	..	..	..	*3