International Energy Outlook 2023 Release date: October 2023

## Table F16. Delivered energy consumption in China by end-use sector and fuel, High Economic Growth case

quadrillion British thermal units

	2025	2030	2035	2040	2045	2050	percentage change,
2022	2025	2030	2035	2040	2045	2050	2022–2050
							2.20/
							2.2%
							3.8%
							-0.8%
							3.9%
							0.8%
12.1	13.2	15.5	17.8	20.7	23.9	27.2	2.9%
							1.6%
							2.6%
							-0.6%
2.0	2.2	2.7	3.0	3.6	4.2	4.6	3.1%
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.8%
3.8	4.2	4.8	5.3	6.0	6.8	7.4	2.4%
14.5	16.0	17.8	19.5	20.7	21.9	22.6	1.6%
7.4	8.0	8.6	9.3	9.9	10.5	10.9	1.4%
39.1	39.0	38.3	36.9	35.2	33.9	32.3	-0.7%
19.2	20.5	22.1	23.6	24.7	25.9	26.8	1.2%
3.3	4.8	5.1	5.4	5.6	5.7	5.7	1.9%
83.5	88.3	92.0	94.7	96.1	97.8	98.2	0.6%
13.6	15.1	15.9	15.7	15.3	15.3	15.5	0.5%
1.4	1.5	1.5	1.6	1.7	1.9	2.1	1.7%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0%
0.7	0.8	1.1	1.3	1.6	1.8	1.9	3.7%
15.7	17.4	18.5	18.7	18.5	18.9	19.6	0.8%
30.5	33.7	36.5	38.5	39.5	41.1	42.3	1.2%
11.6	12.8	14.3	15.8	17.4	19.1	20.9	2.1%
41.9	41.7	40.9	39.4	37.6	36.2	34.6	-0.7%
26.9	29.2	33.0	36.4	40.3	44.4	47.9	2.1%
4.2	5.8	6.1	6.4	6.6	6.7	6.8	1.7%
115.2	123.0	130.8	136.5	141.3		152.4	1.0%
57.1	59.4	67.1	72.7	77.8		85.6	1.5%
							6.2%
							1.2%
0.0	0.0	0.0	0.0	0.0	0.0	0.0	-10.6%
							7.3%
							0.0%
							3.5%
							2.8%
							1.7%
04.1	00.7	100.5	109.5	110.2	127.0	155.7	1.770
20.6	22.0	26.9	20.0	40.0	41 7	42.0	1 20/
							1.2%
							3.8%
							-0.3%
4.0 26.6	4.4 31.4	5.7 35.6	7.1 41.4	8.4 48.9	9.5 53.6	10.4 54.8	3.5%
	0.1 3.8 14.5 7.4 39.1 19.2 3.3 83.5 13.6 1.4 0.0 0.7 15.7 30.5 11.6 41.9 26.9 4.2 115.2 57.1 0.2 172.4 0.0 2.7 54.9 4.0 22.4 84.1 30.6 14.4 96.9 4.0	2.3   2.7     2.3   2.1     5.0   5.7     0.8   0.8     12.1   13.2     0.6   0.7     0.5   0.5     2.0   2.2     0.1   0.1     3.8   4.2     14.5   16.0     7.4   8.0     39.1   39.0     19.2   20.5     3.3   4.8     83.5   88.3     83.5   88.3     13.6   15.1     1.4   1.5     0.0   0.0     0.7   0.8     15.7   17.4     14.9   41.7     26.9   29.2     4.2   5.8     11.6   12.8     41.9   41.7     26.9   29.2     4.2   5.8     115.7   15.4     0.0   0.0     2.7   2.9     54.9   55.7     4.0   4.4     22.4   25.7 <t< td=""><td>2.3     2.7     3.3       2.3     2.1     2.1       5.0     5.7     7.1       0.8     0.8     0.9       12.1     13.2     15.5       0.6     0.7     0.7       0.6     0.7     0.8       0.5     0.5     0.5       2.0     2.2     2.7       0.1     0.1     0.1       3.8     4.2     4.8       14.5     16.0     17.8       7.4     8.0     8.6       39.1     39.0     38.3       19.2     20.5     22.1       3.3     4.8     5.1       83.5     88.3     92.0       13.6     15.1     15.9       1.4     1.5     1.5       0.0     0.0     0.0       0.7     0.8     1.1       15.7     17.4     18.5       14.1     15.1     15.9       1.4     1.5     1.5       0.0     0.0</td><td>2.3     2.7     3.3     4.0       2.3     2.1     2.1     2.0       5.0     5.7     7.1     8.5       0.8     0.8     0.9     0.9       12.1     13.2     15.5     17.8       0.6     0.7     0.7     0.8     0.9       0.5     0.5     0.5     0.5       2.0     2.2     2.7     3.0       0.1     0.1     0.1     0.1       3.8     4.2     4.8     5.3       7.4     8.0     8.6     9.3       39.1     39.0     38.3     36.9       19.2     20.5     22.1     23.6       3.3     4.8     5.1     5.4       83.5     88.3     92.0     94.7       13.6     15.1     15.9     15.7       1.4     1.5     1.6     0.0     0.0       0.0     0.0     0.0     0.0     0.0       0.7     0.8     1.1     1.3</td><td>2.3     2.7     3.3     4.0     4.8       2.3     2.1     2.1     2.0     1.9       5.0     5.7     7.1     8.5     10.4       0.8     0.8     0.9     0.9     0.9       12.1     13.2     15.5     17.8     20.7       0.6     0.7     0.8     0.9     1.0       0.5     0.5     0.5     0.5     0.5       2.0     2.2     2.7     3.0     3.6       0.1     0.1     0.1     0.1     0.1       3.8     4.2     4.8     5.3     6.0       7.4     8.0     8.6     9.3     9.9       3.9.1     39.0     38.3     36.9     35.2       19.2     20.5     22.1     23.6     24.7       3.3     4.8     5.1     5.4     5.6       83.5     88.3     92.0     94.7     96.1       7     0.8     1.1     1.3     1.6       1.4     <t< td=""><td>2.3     2.7     3.3     4.0     4.8     5.7       2.3     2.1     2.1     2.0     1.9     1.9       5.0     5.7     7.1     8.5     10.4     12.5       0.8     0.8     0.9     0.9     0.9     1.0       12.1     13.2     15.5     17.8     20.7     23.9       0.6     0.7     0.7     0.8     0.9     0.9       0.6     0.7     0.7     0.8     0.9     0.9       0.6     0.7     0.8     0.9     1.0     1.1       0.5     0.5     0.5     0.5     0.5     0.5       0.1     0.1     0.1     0.1     0.1     0.1     1.1       1.4.5     16.0     17.8     19.5     20.7     21.9       7.4     8.0     8.6     9.3     20.7     21.9       7.4     8.0     8.6     9.3     20.7     21.9       3.3     4.8     5.1     5.4     5.6</td><td>2.3   2.7   3.3   4.0   4.8   5.7   6.6     2.3   2.1   2.1   2.0   1.9   1.9   1.8     5.0   5.7   7.1   8.5   10.4   12.5   14.6     0.8   0.8   0.9   0.9   0.9   1.0   1.0   1.0     12.1   13.2   15.5   17.8   20.7   23.9   27.2     0.6   0.7   0.8   0.9   1.0   1.1   1.2     0.5   0.5   0.5   0.5   0.5   0.5   0.5     2.0   2.2   2.7   3.0   3.6   4.2   4.6     0.1   0.1   0.1   0.1   0.1   0.1   0.1     3.8   4.2   4.8   5.3   6.0   6.8   7.4     14.5   16.0   17.8   19.5   20.7   21.9   22.6     7.4   8.0   8.6   9.3   3.9   3.2.3   19.2     14.5   15.6   15.7   15.3   15.5   1.4   1.4   1.5</td></t<></td></t<>	2.3     2.7     3.3       2.3     2.1     2.1       5.0     5.7     7.1       0.8     0.8     0.9       12.1     13.2     15.5       0.6     0.7     0.7       0.6     0.7     0.8       0.5     0.5     0.5       2.0     2.2     2.7       0.1     0.1     0.1       3.8     4.2     4.8       14.5     16.0     17.8       7.4     8.0     8.6       39.1     39.0     38.3       19.2     20.5     22.1       3.3     4.8     5.1       83.5     88.3     92.0       13.6     15.1     15.9       1.4     1.5     1.5       0.0     0.0     0.0       0.7     0.8     1.1       15.7     17.4     18.5       14.1     15.1     15.9       1.4     1.5     1.5       0.0     0.0	2.3     2.7     3.3     4.0       2.3     2.1     2.1     2.0       5.0     5.7     7.1     8.5       0.8     0.8     0.9     0.9       12.1     13.2     15.5     17.8       0.6     0.7     0.7     0.8     0.9       0.5     0.5     0.5     0.5       2.0     2.2     2.7     3.0       0.1     0.1     0.1     0.1       3.8     4.2     4.8     5.3       7.4     8.0     8.6     9.3       39.1     39.0     38.3     36.9       19.2     20.5     22.1     23.6       3.3     4.8     5.1     5.4       83.5     88.3     92.0     94.7       13.6     15.1     15.9     15.7       1.4     1.5     1.6     0.0     0.0       0.0     0.0     0.0     0.0     0.0       0.7     0.8     1.1     1.3	2.3     2.7     3.3     4.0     4.8       2.3     2.1     2.1     2.0     1.9       5.0     5.7     7.1     8.5     10.4       0.8     0.8     0.9     0.9     0.9       12.1     13.2     15.5     17.8     20.7       0.6     0.7     0.8     0.9     1.0       0.5     0.5     0.5     0.5     0.5       2.0     2.2     2.7     3.0     3.6       0.1     0.1     0.1     0.1     0.1       3.8     4.2     4.8     5.3     6.0       7.4     8.0     8.6     9.3     9.9       3.9.1     39.0     38.3     36.9     35.2       19.2     20.5     22.1     23.6     24.7       3.3     4.8     5.1     5.4     5.6       83.5     88.3     92.0     94.7     96.1       7     0.8     1.1     1.3     1.6       1.4 <t< td=""><td>2.3     2.7     3.3     4.0     4.8     5.7       2.3     2.1     2.1     2.0     1.9     1.9       5.0     5.7     7.1     8.5     10.4     12.5       0.8     0.8     0.9     0.9     0.9     1.0       12.1     13.2     15.5     17.8     20.7     23.9       0.6     0.7     0.7     0.8     0.9     0.9       0.6     0.7     0.7     0.8     0.9     0.9       0.6     0.7     0.8     0.9     1.0     1.1       0.5     0.5     0.5     0.5     0.5     0.5       0.1     0.1     0.1     0.1     0.1     0.1     1.1       1.4.5     16.0     17.8     19.5     20.7     21.9       7.4     8.0     8.6     9.3     20.7     21.9       7.4     8.0     8.6     9.3     20.7     21.9       3.3     4.8     5.1     5.4     5.6</td><td>2.3   2.7   3.3   4.0   4.8   5.7   6.6     2.3   2.1   2.1   2.0   1.9   1.9   1.8     5.0   5.7   7.1   8.5   10.4   12.5   14.6     0.8   0.8   0.9   0.9   0.9   1.0   1.0   1.0     12.1   13.2   15.5   17.8   20.7   23.9   27.2     0.6   0.7   0.8   0.9   1.0   1.1   1.2     0.5   0.5   0.5   0.5   0.5   0.5   0.5     2.0   2.2   2.7   3.0   3.6   4.2   4.6     0.1   0.1   0.1   0.1   0.1   0.1   0.1     3.8   4.2   4.8   5.3   6.0   6.8   7.4     14.5   16.0   17.8   19.5   20.7   21.9   22.6     7.4   8.0   8.6   9.3   3.9   3.2.3   19.2     14.5   15.6   15.7   15.3   15.5   1.4   1.4   1.5</td></t<>	2.3     2.7     3.3     4.0     4.8     5.7       2.3     2.1     2.1     2.0     1.9     1.9       5.0     5.7     7.1     8.5     10.4     12.5       0.8     0.8     0.9     0.9     0.9     1.0       12.1     13.2     15.5     17.8     20.7     23.9       0.6     0.7     0.7     0.8     0.9     0.9       0.6     0.7     0.7     0.8     0.9     0.9       0.6     0.7     0.8     0.9     1.0     1.1       0.5     0.5     0.5     0.5     0.5     0.5       0.1     0.1     0.1     0.1     0.1     0.1     1.1       1.4.5     16.0     17.8     19.5     20.7     21.9       7.4     8.0     8.6     9.3     20.7     21.9       7.4     8.0     8.6     9.3     20.7     21.9       3.3     4.8     5.1     5.4     5.6	2.3   2.7   3.3   4.0   4.8   5.7   6.6     2.3   2.1   2.1   2.0   1.9   1.9   1.8     5.0   5.7   7.1   8.5   10.4   12.5   14.6     0.8   0.8   0.9   0.9   0.9   1.0   1.0   1.0     12.1   13.2   15.5   17.8   20.7   23.9   27.2     0.6   0.7   0.8   0.9   1.0   1.1   1.2     0.5   0.5   0.5   0.5   0.5   0.5   0.5     2.0   2.2   2.7   3.0   3.6   4.2   4.6     0.1   0.1   0.1   0.1   0.1   0.1   0.1     3.8   4.2   4.8   5.3   6.0   6.8   7.4     14.5   16.0   17.8   19.5   20.7   21.9   22.6     7.4   8.0   8.6   9.3   3.9   3.2.3   19.2     14.5   15.6   15.7   15.3   15.5   1.4   1.4   1.5

Total	172.4	182.8	198.3	209.7	219.8	230.7	238.9	1.2%
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Data source: U.S. Energy Information Administration, World Energy Projection System (2023), run hm\_230821.151836 and Annual Energy Outlook 2023 (March 2023), www.eia.gov/aeo

Note: Totals may not equal sum of components due to independent rounding. End-use sector electricity consumption and end-use sector delivered energy consumption do not include electrical system energy losses incurred in the generation, transmission, and distribution of electricity. Electricity-related losses include energy losses during generation due to thermal efficiency, energy losses during transmission and distribution, and parasitic load. In all regions except the United States, fuel consumed to produce district heat is allocated to the residential, commercial, and industrial end-use sectors according to their respective share of heat demand. We converted electricity generation from renewable sources such as hydroelectric, wind, or solar to British thermal units at a rate of 8,124 British thermal units per kilowatthour, which reflects the average projected conversion efficiency of the U.S. fossil-fueled generating fleet in the Annual Energy Outlook 2021 over the projection period (2022–2050).