

Washington

- Washington has 2,545 MW of overall CHP capacity identified at 5,570 sites.
 - 1,029 MW of industrial on-site CHP potential, primarily in the chemicals, paper, food, lumber and wood, and refining sectors.
 - 1,220 MW of commercial on-site CHP potential, primarily in the commercial (office) buildings, colleges/universities, government buildings, hospitals and multifamily sectors.
- Washington has 138 MW of WHP CHP potential identified at 14 sites in the chemicals, refining, stone/clay/glass and primary metals sectors.
- Washington has 158 MW of CHP potential identified at 1 district energy site.

Table 1: Overall CHP Technical Potential

Business Type	50-500 kW		0.5 - 1 MW		1 - 5 MW		5 - 20 MW		> 20 MW		Total	
	Sites	50-500 kW (MW)	Sites	0.5-1 MW (MW)	Sites	1-5 MW (MW)	Sites	5-20 MW (MW)	Sites	>20 MW (MW)	Total Sites	Total MW
Industrial Topping Cycle CHP	686	133	111	76	113	222	22	203	11	396	943	1,029
Commercial Topping Cycle CHP	3,759	379	581	265	257	384	13	126	2	66	4,612	1,220
WHP CHP	3	0.5	2	2	3	7	3	28	3	100	14	138
District Energy CHP	0	0	0	0	0	0	0	0	1	158	1	158
Total	4,448	512	694	343	373	614	38	357	17	719	5,570	2,545

Table 2: All Industrial CHP Technical Potential (Including Topping Cycle CHP and WHP CHP)

SIC	Industrial Business Type	50-500 kW		0.5 - 1 MW		1 - 5 MW		5 - 20 MW		> 20 MW		Total	
		Sites	50-500 kW (MW)	Sites	0.5-1 MW (MW)	Sites	1-5 MW (MW)	Sites	5-20 MW (MW)	Sites	>20 MW (MW)	Total Sites	Total MW
12	Mining, Except Oil and Gas	0	0	0	0	0	0	0	0	0	0	0	0
13	Oil and Gas Extraction	0	0	0	0	0	0	0	0	0	0	0	0
20	Food	214	44	25	17	34	62	5	43	0	0	278	166
22	Textiles	10	2	3	2	5	10	0	0	0	0	18	14
24	Lumber and Wood	162	31	31	21	34	66	1	12	0	0	228	130
25	Furniture	0	0	0	0	0	0	0	0	0	0	0	0
26	Paper	32	9	11	7	7	12	6	67	4	159	60	254
27	Printing	18	3	0	0	0	0	0	0	0	0	18	3
28	Chemicals	95	17	14	10	21	47	8	65	4	131	142	270
29	Petroleum Refining	2	0	8	6	4	7	3	32	4	151	21	196
30	Rubber/Misc Plastics	56	10	7	5	0	0	0	0	0	0	63	15
32	Stone/Clay/Glass	1	0.2	2	2	3	9	1	5	0	0	7	17
33	Primary Metals	13	4	6	4	6	14	0	0	1	24	26	46
34	Fabricated Metals	12	2	0	0	0	0	0	0	0	0	12	2
35	Machinery/Computer Equip.	8	1	0	0	0	0	0	0	0	0	8	1
37	Transportation Equip.	60	9	5	3	2	2	1	7	1	31	69	51
38	Instruments	0	0	0	0	0	0	0	0	0	0	0	0
39	Misc. Manufacturing	6	1	1	1	0	0	0	0	0	0	7	1.8
49	Gas Processing	0	0	0	0	0	0	0	0	0	0	0	0
	Total	689	133	113	77	116	230	25	231	14	495	957	1,167

Table 3: All Commercial CHP Technical Potential (Including Topping Cycle CHP, WHP CHP and District Energy CHP)

SIC	Commercial Business Type	50-500 kW		0.5 - 1 MW		1 - 5 MW		5 - 20 MW		> 20 MW		Total	
		Sites	50-500 kW (MW)	Sites	0.5-1 MW (MW)	Sites	1-5 MW (MW)	Sites	5-20 MW (MW)	Sites	>20 MW (MW)	Total Sites	Total MW
43	Post Offices	9	1	0	0	0	0	0	0	0	0	9	1
52	Retail	351	50	16	10	4	9	0	0	0	0	371	69
4222	Refrigerated Warehouses	30	4	2	1	0	0	0	0	0	0	32	6
4581	Airports	2	1	1	1	0	0	1	10	0	0	4	12
4952	Waste Water Treatment Plants	35	4	1	1	1	1	0	0	0	0	37	6
4961	District Energy	0	0	0	0	0	0	0	0	1	158	1	158
5411	Food Stores	378	54	0	0	1	1	0	0	0	0	379	55
5812	Restaurants	302	28	0	0	1	2	0	0	0	0	303	30
6512	Commercial Office Buildings	1,265	63	389	156	97	58	0	0	0	0	1,751	277
6513	Multifamily Buildings	293	22	106	53	16	16	0	0	0	0	415	91
7011	Hotels	283	35	17	10	17	25	0	0	0	0	317	70
7211	Laundries	21	4	0	0	1	1	0	0	0	0	22	5
7374	Data Centers	62	10	3	2	3	4	0	0	0	0	68	15
7542	Car Washes	24	2	0	0	0	0	0	0	0	0	24	2
7832	Movie Theaters	0	0	0	0	0	0	0	0	0	0	0	0
7991	Health Clubs	85	9	0	0	1	1	0	0	0	0	86	11
7997	Golf/Country Clubs	76	9	0	0	0	0	0	0	0	0	76	9
8051	Nursing Homes	197	23	0	0	0	0	0	0	0	0	197	23
8062	Hospitals	57	13	15	10	32	70	1	6	0	0	105	99
8211	Schools	0	0	0	0	0	0	0	0	0	0	0	0
8221	College/Univ.	40	7	3	2	45	117	6	74	1	26	95	227
8412	Museums	21	3	0	0	0	0	0	0	0	0	21	3
9100	Government Buildings	200	31	25	17	23	43	2	15	0	0	250	107
9223	Prisons	11	2	2	2	7	15	0	0	0	0	20	19
9711	Military	17	3	1	1	8	20	3	20	1	40	30	84
	Total	3,759	379	581	265	257	384	13	126	3	224	4,613	1,378

Sub-Table 1.1: Waste Heat to Power CHP Technical Potential (Subset of Total CHP Technical Potential)

SIC	WHP CHP Business Type	50-500 kW		0.5 - 1 MW		1 - 5 MW		5 - 20 MW		> 20 MW		Total	
		Sites	50-500 kW (MW)	Sites	0.5-1 MW (MW)	Sites	1-5 MW (MW)	Sites	5-20 MW (MW)	Sites	>20 MW (MW)	Total Sites	Total MW
28	Chemicals	1	0.04	0	0	0	0	0	0	0	0	1	0.04
29	Petroleum Refining	2	0.4	0	0	1	2	2	23	2	75	7	100
32	Stone/Clay/Glass	0	0	2	2	2	6	1	5	0	0	5	13
33	Primary Metals	0	0	0	0	0	0	0	0	1	24	1	24
	Total	3	0.5	2	2	3	7	3	28	3	100	14	138

Sub-Table 1.2: District Energy CHP Technical Potential (Subset of Total CHP Technical Potential)

SIC	District Energy Type	50-500 kW		0.5 - 1 MW		1 - 5 MW		5 - 20 MW		> 20 MW		Total	
		Sites	50-500 kW (MW)	Sites	0.5-1 MW (MW)	Sites	1-5 MW (MW)	Sites	5-20 MW (MW)	Sites	>20 MW (MW)	Total Sites	Total MW
4961	Current Loops without CHP	0	0	0	0	0	0	0	0	1	158	1	158
4961	Current Loops with CHP expansion	0	0	0	0	0	0	0	0	0	0	0	0
	Total	0	0	0	0	0	0	0	0	1	158	1	158