

Released: December 2025
Next MECS will be filed in 2027

Table 8.3 Number of establishments by usage of cogeneration technologies, 2022

Level: National data
Row: NAICS codes
Column: Usage within cogeneration technologies
Unit: Establishment counts

		Steam turbines supplied by either conventional or fluidized bed boilers															Conventional combustion turbines with heat recovery			Combined-cycle combustion turbines			Internal combustion engines with heat recovery			Steam turbines supplied by heat recovered from high-temperature processes		
NAICS code ^a	Subsector and industry	Establishments ^b	Establishments with any cogeneration technology in use ^c	In use ^d				Not in use ^e				Don't know				In use ^d				Not in use ^e				Don't know				
				In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know							
Total United States																												
311	Food	18,379	162	49	13,516	4,814	28	13,069	5,282	10	13,443	4,927	Q	13,194	5,083	19	13,475	4,885	D									
3112	Grain and Oilseed Milling	661	19	9	507	145	Q	497	156	5	504	152	3	473	185	D	486	D										
311221	Wet Corn Milling and Starch Manufacturing	55	3	D	50	D	0	D	D	D	52	D	0	52	3	0	52	3										
31131	Sugar Manufacturing	64	D	23	22	27	16	D	36	D	0	48	16	0	48	16	9	38	17									
3114	Fruit and Vegetable Preserving and Specialty Food	1,109	32	14	668	427	7	674	428	D	677	D	15	676	418	D	687	D										
3115	Dairy Product Manufacturing	1,087	14	D	808	D	Q	796	308	0	805	282	9	796	282	Q	804	278	D									
3116	Animal Slaughtering and Processing	2,022	5	D	1,422	D	0	D	1,430	D	D	1,426	D	5	1,439	578	D	1,443	D									
312	Beverage and Tobacco Products	5,990	Q	Q	4,771	1,150	Q	4,715	1,227	0	4,815	1,175	9	4,649	1,332	3	4,748	1,239										
3121	Beverages	5,906	Q	D	4,714	D	Q	4,653	1,204	0	4,754	1,152	9	4,588	1,308	3	4,686	1,217										
3122	Tobacco	84	D	D	57	D	0	62	22	0	62	22	0	60	24	0	62	22										
313	Textile Mills	1,096	0	0	769	327	0	749	347	0	745	351	0	742	354	0	745	351										
314	Textile Product Mills	3,638	D	0	3,294	344	D	3,293	D	0	3,293	345	0	3,288	350	0	3,050	588										
315	Apparel	3,236	5	0	2,258	978	D	2,067	D	D	2,071	D	D	2,071	D	5	2,069	1,162										
316	Leather and Allied Products	636	0	0	407	Q	0	409	Q	0	413	Q	0	412	Q	0	413	Q										
321	Wood Products	9,957	52	34	7,581	2,341	17	7,700	2,240	D	7,672	D	20	7,707	2,230	10	7,818	2,129	D									
321113	Sawmills	1,976	38	D	1,387	D	Q	1,514	450	D	1,513	D	14	1,474	488	D	1,522	D										
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	1,173	12	8	864	301	6	860	307	3	857	313	Q	863	305	D	864	D										
321219	Reconstituted Wood Products	119	Q	3	106	10	3	102	14	3	106	10	D	106	D	0	110	9										
3219	Other Wood Products	6,531	D	D	5,145	D	0	5,137	1,394	0	5,113	1,418	0	5,184	1,347	0	5,242	1,289										
322	Paper	3,057	112	90	2,430	537	27	2,411	620	11	2,462	584	11	2,463	583	29	2,445	583										
322110	Pulp Mills	33	17	14	15	4	D	26	D	0	26	D	0	26	D	0	21	6										
322120	Paper Mills	138	33	26	97	16	8	115	15	D	116	D	0	118	D	6	117	15										
322130	Paperboard Mills	164	52	45	83	36	12	119	33	6	124	34	8	124	33	16	111	36										
323	Printing and Related Support	12,389	Q	0	9,504	2,885	Q	9,281	3,098	0	9,108	3,281	0	9,142	3,247	0	9,192	3,197										
324	Petroleum and Coal Products	1,814	103	51	1,105	658	28	1,112	674	23	1,126	665	11	1,119	683	66	1,085	663										
324110	Petroleum Refineries	131	D	69	43	78	10	24	D	0	D	D	0	118	D	52	71	8										
324121	Asphalt Paving Mixture and Block	1,276	16	3	701	573	4	684	588	D	692	D	6	682	588	4	692	580										
324122	Asphalt Shingle and Coating Materials	142	D	0	121	21	0	120	22	0	120	22	D	117	D	0	119	D										
324191	Petroleum Lubricating Oil and Grease Manufacturing	215	9	D	165	D	0	162	53	Q	159	50	D	160	D	D	166	D										
324199	All Other Petroleum and Coal Products Manufacturing	50	9	D	41	D	0	D	D	0	D	D	0	D	43	D	7	36	7									
325	Chemicals	10,044	229	92	7,073	2,879	68	7,264	2,712	26	7,332	2,685	40	7,328	2,675	126	7,404	2,514										
325110	Petrochemicals	60	13	6	35	18	4	37	18	D	38	D	0	39	D	9	41	19										
325120	Industrial Gases	612	6	3	208	401	5	206	401	4	208	390	4	206	392	3	208	392										
325180	Other Basic Inorganic Chemical Manufacturing	587	30	9	475	103	7	480	100	D	478	D	D	481	D	22	465	100										
325193	Ethyl Alcohol	207	43	23	133	51	8	156	43	0	163	44	3	161	43	14	150	43										
325194	Cyclic Crudes, Intermediate and Gum and Wood Chemicals	62	D	0	49	13	0	50	12	0	50	12	0	50	12	D	49	D										
325199	All Other Basic Organic Chemical Manufacturing	590	23	14	467	108	11	470	109	D	480	D	0	480	110	14	465	111										
325211	Plastics Materials and Resins	1,037	34	18	837	182	15	867	155	13	840	183	3	858	166	17	859	161										
325212	Synthetic Rubber	88	D	0	75	13	D	69	D	0	72	16	0	72	16	0	74	14										
325220	Artificial and Synthetic Fibers and Filaments	88	D	0	75	13	D	69	D	0	72	16	0	72	16	0	74	14										
325311	Nitrogenous Fertilizers	161	21	7	111	43	D	116	D	5	112	44	0	116	45	19	100	42										
325312	Phosphatic Fertilizers	79	5	D	49	D	0	49	30	0	49	30	0	49	30	5	44	30										
3254	Pharmaceuticals and Medicines	1,471	14	3	1,083	386	6	988	477	0	987	484	6	929	536	D	1,073	D										
325412	Pharmaceutical Preparation	687	3	D	501	D	0	419	268	0	415	272	0	411	276	D	497	D										
325922	Photographic Film, Paper, Plate, Chemical, and Copy Toner Manufacturing	69	D	D	54	D	0	53	16	0	57	12	0	57	12	0	57	12										
326	Plastics and Rubber Products	8,490	99	11	6,432	2,046	85	6,171	2,233	15	6,108	2,367	D	6,092	D	Q	6,257	2,225										
327	Nonmetallic Mineral Products	12,292	16	D	8,361	D	9	8,074	4,209	3	8,196	4,093	7	8,107	4,178	7	8,362	3,923										
327120	Clay Building Material and Refractories	364	Q	0	280	84	Q	273	87	0	277	87	Q	261	99	0	281	83										
327211	Flat Glass	93	0	0	62	31	0	60	33	0	59	34	0	60	33	0	61	32										
327212	Other Pressed and Blown Glass and Glassware	156	D	D	145	D	0	147	9	D	146	10	D	145	D	0	146	10										
327213	Glass Containers	54	0	0	37	17	0	35	19	0	37	17	0	23	31	0	36	18										
327215	Glass Products from Purchased Glass	599	D	0	400	199	0	368	231	0	374	225	0	354	245	D	412	D										
327310	Cements	159	0	0	134	25	0	128	31	0	130	29	0	130	29	0	131	28										
327410	Lime	95	D	D	39	D	0	38	57	0	38	57	0	36	59	0	41	54										
327420	Gypsum	126	5	0	108	18	5	108	13	3	109	14	D	109	D	3	109	14										
327993	Mineral Wool	185	0	0	167	18	0	167	18	0	166	19	0	165	20	0	166	19										
331	Primary Metals	2,679	33	20	2,056	604	22	2,030	627	10	2,037	631	14	2,014	651	12	2,068	598										
331110	Iron and Steel Mills and Ferroalloys	165	8	D	133	D	0	136	D	D	137	D	0	135	D	D	135	D										
3312	Steel Products from Purchased Steel	564	Q	0	343	221	Q	351	208	0	359	205	D	351	D	0	358	206										
3313	Alumina and Aluminum Production and Processing	353	8	D	283	62	8	268	77	7	271	75	7	265	81	7	278	68										
331314	Secondary Smelting and Alloying of Aluminum	90	5	D	71	D	0	66	D	0	66	D	0	66	D	0	66	D										
331315	Aluminum Sheet, Plate and Foils	67	D	0	54	D	0	52	13	0	52	12	0	52	15	0	55	12										
331318	Other Aluminum Rolling, Drawing and Extruding	182	D	D	143	D	0	137	D	0	138	D	0	135	D	D	145	D										
3314	Nonferrous Metal (except Aluminum) Production and Processing	519	6	D	440	D	5	437	77	D	445	D	D	437	D	D	446	D										
331410	Nonferrous Metal (except Aluminum) Smelting and Refining	74																										

*The Bureau of the Census classifies establishments using the 2022 North American Industry Classification System (NAICS).
†The establishments column includes those units which reported any of the five listed cogeneration technologies in use anytime in 2022, plus those units where usage of those cogeneration technologies was not ascertained.
‡This count includes only those establishments that reported any of the five listed cogeneration technologies in use anytime in 2022.
§This count includes only those establishments that reported this cogeneration technology in use anytime in 2022.
¶This includes establishments that have the equipment but are currently not in use as well as those establishments that do not have or never have had the equipment during 2022.
* Estimate less than 0.5
D=Withheld to avoid disclosing data for individual establishments
Q=Withheld because relative standard error (RSE) is greater than 50%
NA=Not available
-- Estimation is not applicable

The Census Bureau has reviewed this data product to ensure appropriate access, use, and disclosure protection of the confidential source data (Project No. 7504703, Disclosure Review Board (DRB) approval number: CDRB-PY25-0054).

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Next MECS will be fielded in 2027

RSE Table 8.3 Relative standard errors for Table 8.3
Unit: Percentage

		Steam turbines supplied by either conventional or fluidized bed boilers					Conventional combustion turbines with heat recovery			Combined-cycle combustion turbines			Internal combustion engines with heat recovery			Steam turbines supplied by heat recovered from high-temperature processes		
		Establishments with any cogeneration technology in use ^c		In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know
NAICS code ^a	Subsector and industry	Establishments ^b	technology in use ^c	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know	In use ^d	Not in use ^e	Don't know
Total United States																		
311	Food	0.0	32.8	5.0	6.4	12.1	25.9	6.6	11.5	11.3	6.4	11.9	52.1	6.5	12.0	24.0	6.4	12.0
3112	Grain and Oilseed Milling	0.0	28.9	2.5	9.1	22.9	62.1	9.3	21.5	0.0	9.2	21.8	0.0	9.1	20.7	0	9.3	0
311221	Wet Corn Milling and Starch Manufacturing	0.0	0.0	0	0.0	0	X	0	0	0	0.0	0	X	0.0	0.0	X	0.0	0.0
31131	Sugar Manufacturing	0.0	0.0	0.0	0.0	0.0	0	0.0	0	X	0.0	0.0	X	0.0	0.0	0.0	0.0	0.0
3114	Fruit and Vegetable Preserving and Specialty Food	0.0	20.1	12.6	16.2	23.6	22.6	16.1	23.5	0	16.0	0	40.8	16.0	24.1	0	15.7	0
3115	Dairy Product Manufacturing	0.0	32.8	0	12.6	0	55.7	13.0	26.7	X	12.6	28.5	48.3	12.8	28.4	85.7	12.6	28.8
3116	Animal Slaughtering and Processing	0.0	48.4	0	8.7	0	0	8.8	0	0	8.8	0	48.4	8.7	17.1	0	8.7	0
312	Beverage and Tobacco Products	0.0	51.4	68.6	7.4	15.6	97.4	7.4	15.4	X	7.4	15.5	0.0	7.5	14.9	0.0	7.4	15.1
3121	Beverages	0.0	52.0	0	7.5	0	97.4	7.5	15.7	X	7.5	15.8	0.0	7.6	15.2	0.0	7.5	15.4
3122	Tobacco	0.0	0	0	0.0	0	X	0.0	0.0	X	0.0	0.0	X	0.0	0.0	X	0.0	0.0
313	Textile Mills	0.0	X	X	13.1	46.9	X	13.5	44.2	X	13.6	43.7	X	13.7	43.4	X	13.6	43.8
314	Textile Product Mills	0.0	0	X	23.1	49.4	0	23.2	0	X	23.2	49.2	X	23.2	48.4	X	24.2	49.7
315	Apparel	0.0	43.6	X	23.3	35.2	0	24.4	0	0	24.3	0	0	24.3	0	43.6	24.4	32.7
316	Leather and Allied Products	0.0	X	X	21.4	53.8	X	21.3	54.2	X	21.1	55.2	X	21.1	54.9	X	21.1	55.2
321	Wood Products	0.0	13.6	16.8	7.0	12.7	33.8	6.9	13.1	0	6.9	0	36.1	7.0	12.6	5.3	6.9	13.2
321113	Sawmills	0.0	16.4	0	9.3	0	50.2	9.1	14.3	0	9.1	0	43.1	9.3	13.7	0	9.0	0
3212	Veneer, Plywood, and Engineered Wood Product Manufacturing	0.0	27.8	7.4	11.5	24.0	9.9	11.6	23.6	0.0	11.6	23.2	65.2	11.5	23.8	0	11.5	0
321219	Reconstituted Wood Products	0.0	53.4	0.0	20.5	4.9	0.0	21.2	0.0	0.0	20.5	0.0	0	20.2	0	X	19.7	0.0
3219	Other Wood Products	0.0	0	0	9.9	0	X	9.9	19.8	X	9.9	19.6	X	9.9	19.6	X	9.8	20.4
322	Paper	0.0	1.9	0.6	13.0	23.1	7.6	12.7	23.4	0.0	12.4	24.5	0.0	12.4	24.6	0.0	12.5	24.5
322110	Pulp Mills	0.0	0.0	0.0	0.0	0.0	0	0.0	0	0	0.0	0	0	0.0	0	0.0	0.0	0.0
322120	Paper Mills	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0	0	0.0	0	0.0	0.0	0.0
322130	Paperboard Mills	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
323	Printing and Related Support	0.0	60.1	X	8.7	17.9	60.1	8.9	17.2	X	9.0	16.7	X	9.0	16.8	X	8.9	17.0
324	Petroleum and Coal Products	0.0	3.8	2.1	3.8	5.8	4.4	3.7	5.7	15.3	3.7	5.8	3.6	3.7	5.6	1.6	3.8	5.8
324110	Petroleum Refineries	0.0	0.0	0.0	0.0	0.0	0	0	0	0	0	0	0	0.0	0	0.0	0.0	0.0
324121	Asphalt Paving Mixture and Block	0.0	10.4	41.2	4.9	6.4	30.2	5.0	6.2	0	4.9	0	6.7	5.0	6.2	24.7	4.9	6.3
324122	Asphalt Shingle and Coating Materials	0.0	0	X	15.3	5.0	X	15.4	4.8	X	15.4	4.8	0	15.9	0	0	15.5	0
324191	Petroleum Lubricating Oil and Grease Manufacturing	0.0	41.3	0	8.9	0	X	9.1	22.6	55.3	9.3	23.9	0	9.2	0	0	8.8	0
324199	All Other Petroleum and Coal Products Manufacturing	0.0	0.0	0	0.0	0	X	0	X	0	0	0	0	0.0	0	0.0	0.0	0.0
325	Chemicals	0.0	9.6	7.8	6.9	13.6	3.3	6.9	13.7	5.3	6.9	13.5	47.3	6.9	13.6	16.4	6.9	14.2
325110	Petrochemicals	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0	0.0	0	0	0.0	0	0.0	0.0	0.0
325120	Industrial Gases	0.0	22.8	49.6	19.4	32.2	27.3	19.6	32.3	36.5	32.9	30.8	34.1	33.0	30.6	49.6	32.9	30.6
325180	Other Basic Inorganic Chemical Manufacturing	0.0	17.7	20.3	27.5	38.2	0.0	27.2	39.1	0	27.3	0	0	27.1	0	23.8	28.1	39.2
325193	Ethyl Alcohol	0.0	12.3	3.5	5.8	12.9	21.4	5.5	10.9	X	5.2	10.6	0.0	5.3	10.9	37.0	5.2	10.9
325194	Cyclic Crudes, Intermediate and Gum and Wood Chemicals	0.0	0	X	0.0	0.0	X	0.0	0.0	X	0.0	0.0	X	0.0	0.0	0	0.0	0
325199	All Other Basic Organic Chemical Manufacturing	0.0	12.5	20.1	16.3	32.8	0.0	16.2	32.5	0	15.8	0	X	15.9	32.1	0.0	16.3	32.1
325211	Plastics Materials and Resins	0.0	19.5	32.9	20.1	28.9	0.0	19.7	26.1	0.0	20.2	24.7	0.0	19.7	24.7	18.1	19.9	25.4
325212	Synthetic Rubber	0.0	0.0	0	36.3	0	0	36.9	0.0	X	35.9	0.0	0	36.2	0	X	35.3	0.0
325220	Artificial and Synthetic Fibers and Filaments	0.0	0	X	7.8	0.0	0	8.5	0	X	8.1	0.0	X	8.1	0.0	X	7.9	0.0
325311	Nitrogenous Fertilizers	0.0	0.0	0.0	0.0	0.0	0	0.0	0	0.0	0.0	0.0	X	0.0	0.0	0.0	0.0	0.0
325312	Phosphatic Fertilizers	0.0	0.0	0	0.0	0	X	0.0	0.0	X	0.0	0.0	X	0.0	0.0	0.0	0.0	0.0
3254	Pharmaceuticals and Medicines	0.0	0.0	0.0	11.4	26.0	0.0	11.1	24.2	X	11.1	23.9	0.0	11.1	23.1	0	11.5	0
325412	Pharmaceutical Preparation	0.0	0	0	17.6	0	X	16.1	30.1	X	16.2	29.7	X	16.4	29.3	0	17.8	0
325992	Photographic Film, Paper, Plate, Chemical, and Copy Toner Manufacturing	0.0	0	0	0.0	0	X	0.0	0.0	X	0.0	0.0	X	0.0	0.0	X	0.0	0.0
326	Plastics and Rubber Products	0.0	43.3	41.1	7.8	16.0	49.2	8.0	15.5	40.4	8.1	14.9	0	8.1	0	56.1	8.0	15.2
327	Nonmetallic Mineral Products	0.0	22.4	0	8.9	0	36.5	9.1	14.0	0.0	9.1	14.2	48.2	9.2	13.9	21.1	8.9	14.5
327120	Clay Building Material and Refractories	0.0	84.4	X	13.1	36.4	84.4	13.4	35.1	X	13.2	35.1	84.4	13.9	32.1	X	13.0	36.9
327211	Flat Glass	0.0	X	X	5.3	6.2	X	5.6	5.8	X	5.7	5.6	X	5.6	5.7	X	5.4	6.0
327212	Other Pressed and Blown Glass and Glassware	0.0	0	0	25.6	0	X	25.2	20.7	X	25.4	18.6	0	25.6	0	X	25.4	18.6
327213	Glass Containers	0.0	X	X	0.0	3.2	X	0.0	2.9	X	0.0	3.3	X	0.0	1.8	X	0.0	3.1
327215	Glass Products from Purchased Glass	0.0	0	X	13.6	22.0	X	14.5	19.5	X	14.3	20.0	X	14.9	18.7	0	14.4	0
327310	Cements	0.0	X	X	19.9	46.4	X	20.8	37.3	X	20.6	38.7	X	20.6	38.9	X	20.4	40.4
327410	Lime	0.0	0	0	0.0	0	X	0.0	0.0	X	0.0	0.0	X	0.0	0.0	X	0.0	0.0
327420	Gypsum	0.0	0.0	X	12.2	2.6	0.0	12.2	3.6	0.0	12.1	3.3	0	12.1	0	0.0	12.1	3.3
327993	Mineral Wool	0.0	X	X	28.4	0.0	X	28.5	0.0	X	28.6	0.0	X	28.8	0.0	X	28.6	0.0
331	Primary Metals	0.0	11.2	0.0	3.7	7.0	16.9	3.9	5.7	0.0	3.9	5.6	0.0	3.9	5.6	0.0	3.8	5.8
331110	Iron and Steel Mills and Ferroalloys	0.0	0.0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0
3312	Steel Products from Purchased Steel	0.0	55.3	X	8.0	15.7	85.8	9.9	11.9	X	9.8	12.0	0	10.0	0	X	9.8	12.0
3313	Alumina and Aluminum Production and Processing	0.0	0.0	0.0	6.7	4.9	0.0	7.0	5.1	0.0	7.0	4.2	0.0	7.1	4.9	0.0	6.8	4.5
331314	Secondary Smelting and Alloying of Aluminum	0.0	0.0	0	0.0	0	0	0.0	0	0	0	0	0	0	0	0	0	0
331315	Aluminum Sheet, Plate and Foils	0.0	X	X	0	0	X	29.2	0.0	X	28.6	0.0	X	30.5	0.0	X	28.6	0.0
331318	Other Aluminum Rolling, Drawing and Extruding	0.0	0	0	7.3	0	0	7.7	0	0	7.7	0	0	7.8	0	0	7.3	0
3314	Nonferrous Metal (except Aluminum) Production and Processing	0.0	0.0	0	10.7	0	0.0	10.8	12.8	0	10.6	0	0	10.8	0	0	10.6	0
331410																		

³ The establishments column includes those units which reported any of the five listed cogeneration technologies in use anytime in 2022, plus those units where usage of those cogeneration technologies was not ascertained.

⁴ This count includes only those establishments that reported any of the five listed cogeneration technologies in use anytime in 2022.

⁵ This count includes only those establishments that reported this cogeneration technology in use anytime in 2022.

⁶ This includes establishments that have the equipment but are currently not in use as well as those establishments that do not have or never have had the equipment during 2022.

^{*} Estimate less than 0.5

D=Withheld to avoid disclosing data for individual establishments

Q=Withheld because relative standard error (RSE) is greater than 50%

NA=Not available

-- Estimation is not applicable

X=Not defined because RSE corresponds to a data table value of zero

The Census Bureau has reviewed this data product to ensure appropriate access, use, and disclosure protection of the confidential source data (Project No. 7504703, Disclosure Review Board (DRB) approval number: CBDRB-FY25-0054).