

Data release date: June 2023

Revised data release date: March 2024

**Table CE5.8 Detailed household natural gas and propane end-use expenditures—averages, 2020**

	Average energy expenditures									
	Natural gas (dollars per household using the end use)					Propane (dollars per household using the end use)				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	474	222	24	30	427	48	698	383	43	52
<b>Census region and division</b>										
Northeast	646	294	25	47	444	48	914	456	54	66
New England	717	291	32	39	Q	46	909	457	46	71
Middle Atlantic	627	295	24	48	443	48	916	455	58	62
Midwest	536	150	17	19	279	33	893	274	33	38
East North Central	555	150	16	19	276	32	1,016	291	35	44
West North Central	489	151	18	18	Q	34	708	242	25	28
South	420	220	30	28	498	47	423	388	43	51
South Atlantic	503	249	37	35	705	64	432	434	45	55
East South Central	435	204	33	28	Q	43	413	375	Q	58
West South Central	318	198	26	22	322	38	411	336	42	42
West	326	243	28	27	417	54	694	441	45	50
Mountain	345	178	23	23	355	40	784	378	32	35
Mountain North	397	160	23	17	Q	Q	909	290	Q	30
Mountain South	271	203	23	27	314	42	620	435	Q	38
Pacific	315	273	30	29	459	61	630	484	48	57
<b>Census urban/rural classification<sup>d</sup></b>										
Urban	472	225	24	31	421	49	562	437	51	56
Urbanized area	472	229	24	31	428	49	597	434	51	56
Urban cluster	475	187	23	24	Q	40	477	449	51	58
Rural	490	189	25	22	458	45	740	361	40	51
<b>Climate region<sup>e</sup></b>										
Very cold and Cold	544	173	18	22	350	33	911	350	41	53

**Table CE5.8 Detailed household natural gas and propane end-use expenditures—averages, 2020**

**Average energy expenditures**

	Natural gas (dollars per household using the end use)					Propane (dollars per household using the end use)				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	474	222	24	30	427	48	698	383	43	52
Mixed-humid	550	267	28	43	611	52	517	413	41	54
Mixed-dry and Hot-dry	257	242	28	26	396	53	722	460	46	46
Hot-humid	277	223	32	28	396	45	301	363	53	51
Marine	383	307	30	32	Q	69	568	452	Q	58
<b>Housing unit type</b>										
Single-family detached	523	214	25	25	428	46	739	386	44	54
Single-family attached	448	225	21	27	Q	27	464	481	57	73
Apartments in buildings with 2–4 units	431	254	23	34	N	Q	229	451	Q	46
Apartments in buildings with 5 or more units	244	250	26	55	N	66	193	314	N	51
Mobile homes	343	182	26	21	Q	Q	581	349	35	40
<b>Ownership of housing unit</b>										
Owned	519	215	24	27	427	46	712	378	44	53
Single-family	528	213	24	25	428	46	731	380	45	55
Apartments	453	276	20	58	N	Q	Q	Q	N	Q
Mobile homes	336	184	24	22	Q	Q	575	354	31	40
Rented <sup>f</sup>	340	239	28	38	Q	64	579	419	38	46
Single-family	430	228	28	26	Q	Q	771	506	39	47
Apartments	284	246	27	45	N	69	202	362	Q	47
Mobile homes	376	171	Q	16	N	N	617	Q	Q	41
<b>Year of construction</b>										
Before 1950	608	231	24	36	463	31	916	332	40	56
1950 to 1959	525	215	22	28	379	66	917	302	57	57
1960 to 1969	481	220	24	32	352	Q	710	338	40	47

**Table CE5.8 Detailed household natural gas and propane end-use expenditures—averages, 2020**

Average energy expenditures

	Natural gas (dollars per household using the end use)					Propane (dollars per household using the end use)				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	474	222	24	30	427	48	698	383	43	52
1970 to 1979	434	214	26	28	312	48	841	374	42	50
1980 to 1989	409	219	26	27	437	58	724	398	44	55
1990 to 1999	431	222	25	28	488	45	658	413	37	49
2000 to 2009	400	238	25	27	398	41	473	454	50	51
2010 to 2015	340	216	25	31	497	45	423	373	42	46
2016 to 2020	347	203	22	24	494	71	408	322	Q	69
<b>Total square footage<sup>g</sup></b>										
Less than 1,000	297	237	23	39	N	73	425	351	36	43
1,000 to 1,499	406	225	24	34	243	44	602	406	48	53
1,500 to 1,999	479	218	25	27	372	44	584	376	49	54
2,000 to 2,499	514	206	24	26	402	52	757	373	40	52
2,500 to 2,999	567	215	24	24	463	46	761	386	36	55
3,000 or more	647	223	25	24	447	45	899	393	44	54
<b>Number of household members</b>										
1 member	426	171	14	29	224	35	682	268	34	40
2 members	489	203	22	30	424	52	673	358	36	53
3 members	490	256	25	31	488	52	746	483	60	57
4 members	487	273	31	29	456	42	786	515	56	62
5 members	469	293	36	32	376	40	685	574	52	63
6 or more members	527	314	40	28	368	Q	755	488	Q	53
<b>2020 annual household income</b>										
Less than \$5,000	379	228	25	29	N	Q	742	349	Q	33
\$5,000 to \$9,999	398	209	15	36	N	Q	430	310	Q	43
\$10,000 to \$19,999	408	209	19	23	Q	Q	671	337	Q	44
\$20,000 to \$39,999	426	198	22	26	389	62	667	338	39	46

**Table CE5.8 Detailed household natural gas and propane end-use expenditures—averages, 2020**

**Average energy expenditures**

	Natural gas (dollars per household using the end use)					Propane (dollars per household using the end use)				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	474	222	24	30	427	48	698	383	43	52
\$40,000 to \$59,999	449	201	21	28	383	39	713	353	46	51
\$60,000 to \$99,999	470	225	25	29	351	45	666	396	43	56
\$100,000 to \$149,999	493	233	25	33	373	42	748	440	42	61
\$150,000 or more	584	259	28	35	466	51	804	418	51	59
<b>Payment method for energy bills</b>										
All paid by household	485	219	24	27	424	48	704	383	43	53
Some paid by household, some included in rent or condo fee	327	265	31	64	Q	Q	528	360	Q	31
All included in rent or condo fee	351	241	Q	35	N	Q	480	525	Q	64
Some other method	647	187	Q	31	N	N	N	Q	N	Q

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Average energy expenditures										
	Natural gas (dollars per household using the end use)					Propane (dollars per household using the end use)				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	474	222	24	30	427	48	698	383	43	52

Data source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-457A, D, E, F, G of the *2020 Residential Energy Consumption Survey*

Notes: Because of rounding, data may not sum to totals. See RECS Terminology for definition of terms used in these tables.

<sup>a</sup> Includes main (primary) and secondary space heating.

<sup>b</sup> *Clothes dryers* excludes electricity used for controls and spinning the drum.

<sup>c</sup> *Cooking* includes ranges (units with both a cooktop and an oven), separate cooktops, and separate ovens. Microwaves, small kitchen appliances, and outdoor cooking are excluded.

<sup>d</sup> Housing units are classified using criteria created by the U.S. Census Bureau based on 2010 Census data. Urbanized areas are densely settled groupings of blocks or tracts with 50,000 or more people. Urban clusters have at least 2,500 but less than 50,000 people. All other areas are rural.

<sup>e</sup> The Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), created these climate regions. We combined climate regions for this publication. The Subarctic region is included with data for *Very-cold and Cold*.

<sup>f</sup> *Rented* includes households that occupy their primary housing units without paying rent.

<sup>g</sup> *Total square footage* includes all basements, finished or conditioned (heated or cooled) areas of attics, and conditioned garage space that is attached to the home. Unconditioned and unfinished areas in attics and attached garages are excluded. The square footage of the home is based on respondent reports. Previous RECS cycles calculated square footage based on interviewer measurements. For households that did not report an exact square footage estimate, the square footage of the home was imputed based on a reported square footage range and/or characteristics of the home. See *2020 RECS Square Footage Methodology* for full details about data collection and processing.

Q = Data withheld because either the relative standard error (RSE) was greater than 50% or fewer than 10 households in reporting sample.

N = No households in reporting sample.

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**Relative standard errors (RSEs) for Table CE5.8 Detailed household natural gas and propane end-use expenditures—averages, 2020**

**RSEs for average energy expenditures**

	Natural gas					Propane				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	0.78	0.90	2.22	1.88	6.28	7.59	2.94	2.44	5.85	2.46
<b>Census region and division</b>										
Northeast	1.62	2.88	4.91	5.03	8.65	23.21	6.37	3.83	11.83	4.17
New England	2.23	2.94	7.02	5.31	0.00	22.78	6.68	4.54	11.04	7.16
Middle Atlantic	2.03	3.54	5.66	5.90	8.83	29.08	8.77	5.33	15.56	5.87
Midwest	1.12	1.34	3.32	3.49	13.45	20.78	4.18	3.48	10.76	7.07
East North Central	1.48	1.66	3.67	3.91	13.93	30.14	5.89	4.59	12.77	9.34
West North Central	1.56	1.44	7.02	4.52	0.00	27.03	5.19	3.91	11.98	10.04
South	1.62	1.18	4.83	3.50	11.12	8.34	6.01	4.75	15.37	4.89
South Atlantic	2.16	2.04	7.98	5.79	14.72	16.55	8.40	7.34	24.37	7.70
East South Central	3.23	2.80	11.82	8.39	38.16	20.86	10.20	8.15	0.00	9.14
West South Central	2.32	1.72	5.85	3.08	12.14	8.44	11.01	5.30	20.72	7.32
West	1.53	1.28	4.12	2.22	10.85	11.80	8.57	4.33	10.88	5.98
Mountain	1.74	1.44	6.96	4.11	11.60	11.31	9.53	7.51	26.56	9.93
Mountain North	1.72	2.17	14.30	6.26	26.74	27.61	11.70	7.27	72.41	14.04
Mountain South	3.15	2.13	6.28	5.46	12.82	12.95	18.77	8.79	28.72	13.16
Pacific	2.40	1.56	4.81	2.47	13.98	15.05	13.60	5.13	12.15	8.04
<b>Census urban/rural classification<sup>d</sup></b>										
Urban	0.80	0.92	2.34	2.05	6.41	7.74	7.83	3.51	12.90	5.98
Urbanized area	0.90	1.00	2.42	2.23	6.41	8.02	9.17	3.59	17.30	6.77
Urban cluster	2.27	2.57	6.22	5.93	23.31	24.44	11.67	9.06	16.85	10.00
Rural	2.26	2.41	6.36	4.79	16.82	18.61	3.02	2.98	7.23	2.72
<b>Climate region<sup>e</sup></b>										

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RSEs for average energy expenditures

	Natural gas					Propane				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	0.78	0.90	2.22	1.88	6.28	7.59	2.94	2.44	5.85	2.46
Very cold and Cold	0.94	0.81	2.72	2.57	9.77	11.49	3.22	3.19	8.35	3.87
Mixed-humid	1.40	2.45	4.97	4.81	11.31	17.80	7.14	4.64	12.26	5.46
Mixed-dry and Hot-dry	2.77	1.83	4.81	2.94	12.70	14.16	18.19	6.03	16.55	11.42
Hot-humid	3.15	1.87	7.27	4.76	14.39	8.04	11.83	6.12	15.71	8.30
Marine	3.21	2.73	8.61	4.04	25.60	22.04	17.41	9.40	19.65	14.11
<b>Housing unit type</b>										
Single-family detached	0.77	0.91	2.45	1.82	6.40	7.30	3.05	2.64	6.47	2.78
Single-family attached	1.96	2.10	5.51	4.49	33.59	34.26	20.28	10.80	15.27	17.00
Apartments in buildings with 2–4 units	3.25	3.19	14.12	5.94	0.00	49.32	34.65	10.03	28.26	35.01
Apartments in buildings with 5 or more units	4.31	3.73	14.04	6.77	0.00	31.42	13.10	12.10	0.00	25.97
Mobile homes	3.49	4.50	20.04	4.79	0.00	57.25	8.52	6.20	17.98	6.43
<b>Ownership of housing unit</b>										
Owned	0.79	0.90	2.15	2.05	6.32	6.90	3.01	2.46	6.43	2.76
Single-family	0.77	0.87	2.31	1.74	6.32	7.15	3.08	2.62	6.71	2.79
Apartments	6.21	7.25	11.48	11.14	0.00	12.55	20.50	127.77	0.00	79.39
Mobile homes	4.03	4.86	25.59	5.71	0.00	57.25	9.10	5.80	17.29	7.24
Rented <sup>f</sup>	2.15	2.11	7.81	5.00	45.18	22.32	9.05	6.40	11.65	9.25
Single-family	2.32	1.99	10.50	5.49	45.18	29.56	9.92	7.93	14.54	9.67
Apartments	3.26	2.78	12.26	6.01	0.00	27.38	14.80	8.45	28.26	24.49
Mobile homes	10.71	8.26	14.07	12.81	0.00	0.00	17.92	33.36	0.00	13.74
<b>Year of construction</b>										
Before 1950	1.84	2.84	6.32	4.13	22.44	38.90	7.04	8.26	17.63	7.94

**Relative standard errors (RSEs) for Table CE5.8 Detailed household natural gas and propane end-use expenditures—averages, 2020**

RSEs for average energy expenditures

	Natural gas					Propane				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	0.78	0.90	2.22	1.88	6.28	7.59	2.94	2.44	5.85	2.46
1950 to 1959	2.39	2.59	5.11	6.90	18.90	35.85	12.23	7.81	38.31	10.74
1960 to 1969	2.48	3.23	7.47	5.93	14.35	30.22	9.62	10.00	19.49	10.20
1970 to 1979	1.88	2.13	6.11	6.47	19.83	16.72	7.20	6.05	12.88	7.14
1980 to 1989	2.41	2.63	6.82	5.41	21.12	20.11	7.42	5.83	19.66	7.16
1990 to 1999	2.06	2.18	6.50	6.47	11.96	11.37	7.51	4.58	10.05	7.01
2000 to 2009	1.91	1.93	5.06	4.73	12.03	13.46	8.49	4.96	13.72	5.76
2010 to 2015	3.61	3.75	8.67	7.65	28.43	17.67	10.96	6.69	30.30	10.83
2016 to 2020	4.28	4.48	10.37	6.12	18.37	15.30	12.37	7.53	20.27	16.04
<b>Total square footage<sup>e</sup></b>										
Less than 1,000	2.63	2.66	10.24	5.26	0.00	32.74	11.84	5.45	24.18	9.22
1,000 to 1,499	1.88	2.33	5.70	4.61	15.22	21.80	6.86	7.15	14.80	7.33
1,500 to 1,999	1.46	2.03	5.68	3.66	28.44	15.44	7.20	5.36	17.38	6.19
2,000 to 2,499	1.44	1.88	4.28	3.61	18.44	15.04	5.83	5.86	17.19	5.53
2,500 to 2,999	2.13	2.22	5.83	4.39	13.70	16.57	8.47	6.12	12.28	8.25
3,000 or more	1.50	1.85	4.05	2.60	8.19	8.70	5.56	3.68	9.18	5.61
<b>Number of household members</b>										
1 member	1.69	2.27	5.45	6.28	16.86	19.90	6.10	5.12	14.36	6.59
2 members	1.26	1.50	3.84	3.42	12.02	11.66	4.25	3.12	7.23	4.12
3 members	2.19	2.91	3.77	5.05	11.43	16.06	9.27	4.77	22.54	6.95
4 members	2.11	1.64	4.87	4.14	13.91	16.25	7.97	5.00	9.69	6.76
5 members	3.10	2.96	5.82	7.87	17.63	29.99	13.26	7.63	16.45	14.09
6 or more members	4.49	2.90	8.93	7.42	25.40	30.93	14.23	4.86	38.04	11.75
<b>2020 annual household income</b>										
Less than \$5,000	5.18	5.97	18.45	12.29	0.00	0.00	17.76	7.40	48.88	16.62



**Relative standard errors (RSEs) for Table CE5.8 Detailed household natural gas and propane end-use expenditures—averages, 2020**

**RSEs for average energy expenditures**

	Natural gas					Propane				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	0.78	0.90	2.22	1.88	6.28	7.59	2.94	2.44	5.85	2.46
\$5,000 to \$9,999	7.19	8.52	15.47	18.05	0.00	35.84	18.49	13.47	34.53	18.85
\$10,000 to \$19,999	3.57	3.87	9.83	5.94	0.00	40.55	11.67	11.44	16.05	8.07
\$20,000 to \$39,999	2.30	1.84	6.96	5.85	29.65	27.13	7.33	6.64	17.49	6.21
\$40,000 to \$59,999	2.10	2.40	4.95	6.43	23.60	27.58	7.47	4.85	22.32	6.73
\$60,000 to \$99,999	1.46	2.08	5.66	3.37	20.44	21.09	4.68	4.28	13.19	6.71
\$100,000 to \$149,999	1.93	2.84	5.76	5.16	13.62	13.36	7.14	5.47	11.52	6.22
\$150,000 or more	1.58	1.71	3.70	5.40	7.24	8.19	8.39	4.89	14.06	6.75
<b>Payment method for energy bills</b>										
All paid by household	0.77	0.82	2.23	1.77	6.36	7.38	2.86	2.49	6.06	2.51
Some paid by household, some included in rent or condo fee	5.47	7.15	24.77	9.31	66.32	60.98	30.25	10.39	31.53	21.71
All included in rent or condo fee	7.60	9.31	55.68	18.73	0.00	48.47	43.37	21.29	35.83	32.79
Some other method	36.71	9.13	24.84	13.65	0.00	0.00	0.00	27.02	0.00	46.18

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	Natural gas					Propane				
	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>	Pool heaters	Hot tub heaters	Space heating <sup>a</sup>	Water heating	Clothes dryers <sup>b</sup>	Cooking <sup>c</sup>
<b>All homes</b>	0.78	0.90	2.22	1.88	6.28	7.59	2.94	2.44	5.85	2.46

Data source: U.S. Energy Information Administration, Office of Energy Consumption and Efficiency Statistics, Forms EIA-457A, D, E, F, G of the *2020 Residential Energy Consumption Survey*

Notes: See RECS Terminology for definition of terms used in these tables.

<sup>a</sup> Includes main (primary) and secondary space heating.

<sup>b</sup> *Clothes dryers* excludes electricity used for controls and spinning the drum.

<sup>c</sup> *Cooking* includes ranges (units with both a cooktop and an oven), separate cooktops, and separate ovens. Microwaves, small kitchen appliances, and outdoor cooking are excluded.

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<sup>e</sup> The Building America program, sponsored by the U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE), created these climate regions. We combined climate regions for this publication. The Subarctic region is included with data for *Very-cold and Cold*.

<sup>f</sup> *Rented* includes households that occupy their primary housing units without paying rent.

<sup>g</sup> *Total square footage* includes all basements, finished or conditioned (heated or cooled) areas of attics, and conditioned garage space that is attached to the home. Unconditioned and unfinished areas in attics and attached garages are excluded. The square footage of the home is based on respondent reports. Previous RECS cycles calculated square footage based on interviewer measurements. For households that did not report an exact square footage estimate, the square footage of the home was imputed based on a reported square footage range and/or characteristics of the home. See *2020 RECS Square Footage Methodology* for full details about data collection and processing.