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Table CE4.13 Annual household end-use expenditures by fuel in the Midwest—totals, 2020

	Number of housing units (million)	Total energy expenditures ^a (billion dollars)																			
		Electricity							Natural gas					Propane			Fuel oil or kerosene				
		Total Mid-west ^b	Total	Space heating ^c	Water heating	Air conditioning	Refrigerators	Other ^d	Total	Space heating ^c	Water heating	Other ^d	Total	Space heating ^c	Water heating	Other ^d	Total	Space heating ^c	Water heating	Other ^d	
All homes	27.04	51.18	34.97	4.45	3.42	5.11	3.10	18.90	13.06	10.18	2.44	0.44	2.69	2.22	0.30	0.17	0.46	0.41	Q	Q	
Census division																					
East North Central	18.55	35.51	23.81	2.88	2.25	3.37	2.16	13.15	9.48	7.42	1.72	0.35	1.84	1.52	0.21	0.12	0.38	0.33	Q	Q	
West North Central	8.50	15.66	11.17	1.57	1.17	1.73	0.93	5.76	3.57	2.76	0.72	0.09	0.85	0.70	0.09	0.05	0.08	0.08	Q	N	
Census urban/rural classification^e																					
Urban	20.77	36.39	24.72	2.80	1.91	3.98	2.30	13.74	11.41	8.87	2.17	0.37	0.16	0.12	0.02	0.02	0.10	0.08	Q	N	
Urbanized area	17.20	30.32	20.39	2.10	1.47	3.37	1.95	11.50	9.72	7.53	1.87	0.32	0.11	0.09	Q	Q	0.09	0.07	Q	N	
Urban cluster	3.57	6.07	4.33	0.70	0.43	0.61	0.35	2.24	1.69	1.34	0.30	0.04	0.04	0.03	Q	Q	Q	Q	N	N	
Rural	6.28	14.79	10.25	1.65	1.51	1.13	0.80	5.16	1.65	1.31	0.27	0.07	2.53	2.10	0.28	0.15	0.36	0.32	Q	Q	
Climate region^f																					
Very cold and Cold	22.09	41.44	27.88	3.42	2.67	3.76	2.54	15.50	10.82	8.45	1.99	0.38	2.30	1.92	0.24	0.14	0.44	0.40	Q	Q	
Mixed-humid	4.96	9.74	7.10	1.03	0.75	1.35	0.56	3.41	2.24	1.73	0.45	0.06	0.39	0.30	0.06	0.03	Q	Q	N	Q	
Mixed-dry and Hot-dry	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Hot-humid	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Marine	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	
Housing unit type																					
Single-family detached	18.58	40.61	27.26	3.08	2.38	4.10	2.38	15.33	10.46	8.37	1.76	0.33	2.47	2.05	0.27	0.15	0.42	0.38	Q	Q	
Single-family attached	1.33	2.18	1.47	0.18	0.11	0.22	0.15	0.82	0.67	0.51	0.13	0.02	Q	Q	Q	Q	Q	Q	Q	N	
Apartments in buildings with 2–4 units	1.95	2.55	1.71	0.35	0.19	0.24	0.16	0.76	0.82	0.56	0.23	0.04	N	N	N	N	Q	Q	Q	N	
Apartments in buildings with 5 or more units	4.20	4.09	3.23	0.63	0.51	0.40	0.32	1.38	0.83	0.52	0.28	0.04	0.02	0.01	Q	Q	Q	Q	Q	N	
Mobile homes	0.97	1.74	1.30	0.22	0.24	0.14	0.09	0.61	0.28	0.23	0.04	0.01	0.15	0.13	0.02	*	Q	Q	N	N	
Ownership of housing unit																					
Owned	19.48	41.29	27.76	3.24	2.37	4.13	2.48	15.54	10.67	8.48	1.84	0.35	2.48	2.03	0.28	0.16	0.38	0.35	Q	Q	
Single-family	17.73	38.60	25.86	2.88	2.11	3.88	2.31	14.68	10.02	8.00	1.70	0.32	2.33	1.91	0.26	0.16	0.38	0.34	Q	Q	
Apartments	0.94	1.23	0.80	0.17	0.07	0.12	0.09	0.35	0.43	0.30	0.11	0.02	Q	Q	N	N	N	N	N	N	
Mobile homes	0.81	1.46	1.10	0.19	0.19	0.12	0.08	0.51	0.22	0.18	0.03	0.01	0.14	0.12	0.02	*	Q	Q	N	N	
Rented ^g	7.56	9.89	7.21	1.21	1.05	0.98	0.61	3.36	2.39	1.71	0.60	0.08	0.22	0.19	0.02	0.01	0.08	0.06	Q	N	
Single-family	2.19	4.20	2.87	0.38	0.37	0.43	0.22	1.47	1.11	0.88	0.20	0.03	0.18	0.16	Q	0.01	Q	Q	Q	N	
Apartments	5.22	5.41	4.14	0.80	0.63	0.52	0.39	1.79	1.22	0.77	0.39	0.06	0.02	0.01	Q	Q	Q	Q	Q	N	
Mobile homes	0.16	0.28	0.21	0.03	0.04	0.02	0.01	0.10	0.06	0.05	Q	*	Q	Q	N	Q	N	N	N	N	
Year of construction																					
Before 1950	6.11	12.16	7.72	0.97	0.72	1.24	0.67	4.12	3.59	2.92	0.56	0.12	0.68	0.60	0.06	0.02	0.16	0.15	Q	Q	
1950 to 1959	3.18	6.13	3.94	0.39	0.34	0.66	0.36	2.19	1.79	1.44	0.30	0.05	0.28	0.23	0.02	0.02	Q	Q	Q	Q	
1960 to 1969	2.90	5.08	3.36	0.41	0.26	0.55	0.32	1.82	1.51	1.19	0.28	0.05	0.18	0.13	0.02	Q	Q	Q	Q	N	
1970 to 1979	4.05	7.68	5.37	0.88	0.56	0.76	0.45	2.71	1.69	1.29	0.34	0.06	0.55	0.51	0.04	0.01	0.07	0.06	Q	N	
1980 to 1989	2.71	4.50	3.32	0.57	0.35	0.45	0.29	1.65	1.01	0.77	0.21	0.03	0.13	0.10	0.02	0.01	Q	Q	Q	Q	
1990 to 1999	3.56	7.22	5.07	0.50	0.42	0.66	0.46	3.02	1.66	1.24	0.35	0.06	0.49	0.38	0.07	0.04	Q	Q	N	Q	
2000 to 2009	2.95	5.68	4.11	0.45	0.44	0.53	0.37	2.32	1.29	0.93	0.30	0.05	0.27	0.20	0.04	0.03	Q	Q	N	N	

Table CE4.13 Annual household end-use expenditures by fuel in the Midwest—totals, 2020

	Number of housing units (million)	Total energy expenditures ^a (billion dollars)																			
			Electricity							Natural gas				Propane			Fuel oil or kerosene				
			Total Mid-west ^b	Total	Space heating ^c	Water heating	Air conditioning	Refrigerators	Other ^d	Total	Space heating ^c	Water heating	Other ^d	Total	Space heating ^c	Water heating	Other ^d	Total	Space heating ^c	Water heating	Other ^d
All homes	27.04	51.18	34.97	4.45	3.42	5.11	3.10	18.90	13.06	10.18	2.44	0.44	2.69	2.22	0.30	0.17	0.46	0.41	Q	Q	

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.

^a Consumption and expenditures for biomass (wood), coal, district steam, and solar thermal are excluded.

^b Total Midwest includes all primary occupied housing units in the Midwest Census Region. Vacant housing units, seasonal units, second homes, military houses, and group quarters are excluded.

^c Includes main (primary) and secondary space heating.

^d Includes end uses not shown in this table. A more detailed breakout of end uses is shown in the CES tables.

^e 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.

^f 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.

^g Rented includes households that occupy their primary housing units without paying rent.

^h 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.

ⁱ Some other fuel includes coal and district steam.

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.

* = Estimate is less than 0.005 and rounds to zero.

Relative standard errors (RSEs) for Table CE4.13 Annual household end-use expenditures by fuel in the Midwest—totals, 2020

	RSEs for number of housing units																			
	RSEs for total energy expenditures ^a																			
	Total Midwest ^b	Electricity							Natural gas				Propane				Fuel oil or kerosene			
Total		Total	Space heating ^c	Water heating	Air conditioning	Refrigerators	Other ^d	Total	Space heating ^c	Water heating	Other ^d	Total	Space heating ^c	Water heating	Other ^d	Total	Space heating ^c	Water heating	Other ^d	
All homes	0.00	0.75	0.90	4.30	3.16	1.55	0.96	1.17	1.62	1.71	2.06	5.24	6.56	7.12	9.35	14.39	19.79	20.84	44.12	50.33
Census division																				
East North Central	0.00	1.00	1.19	5.99	4.31	1.87	1.13	1.59	1.92	2.04	2.50	6.34	8.44	8.94	13.05	18.42	22.51	24.20	44.69	50.33
West North Central	0.00	0.94	1.18	5.34	4.99	2.19	1.36	1.53	2.40	2.49	3.06	9.95	7.61	8.38	9.93	19.55	34.06	34.19	15.91	0.00
Census urban/rural classification^e																				
Urban	0.97	1.38	1.42	4.74	4.02	2.09	1.57	1.66	1.87	2.00	2.26	5.42	34.32	38.76	40.32	42.26	27.51	30.85	45.87	0.00
Urbanized area	1.23	1.68	1.69	5.47	4.84	2.43	1.85	2.04	2.13	2.30	2.49	5.81	44.58	49.17	43.25	70.58	30.55	34.75	45.87	0.00
Urban cluster	4.97	5.60	5.68	10.56	9.47	5.94	5.69	5.73	6.98	7.29	7.26	15.83	39.65	44.00	83.09	51.87	68.90	68.90	0.00	0.00
Rural	3.21	3.35	3.48	8.49	6.43	3.42	3.55	3.58	6.51	6.83	6.76	15.03	6.27	6.76	9.40	15.82	24.48	25.07	76.59	50.33
Climate region^f																				
Very cold and Cold	0.49	1.00	1.21	5.28	3.93	1.86	1.18	1.38	1.87	1.91	2.50	5.77	7.02	7.61	9.78	16.55	20.25	21.22	44.12	58.74
Mixed-humid	2.18	3.01	2.89	6.66	6.95	3.57	3.28	3.44	4.51	4.66	5.88	13.68	19.22	21.07	20.44	24.09	14.03	14.03	0.00	14.03
Mixed-dry and Hot-dry	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hot-humid	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Marine	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Housing unit type																				
Single-family detached	0.00	0.79	1.02	5.00	4.00	1.74	1.16	1.26	1.59	1.68	2.05	5.81	7.22	7.75	10.56	16.20	21.91	22.74	63.22	50.33
Single-family attached	0.00	2.51	2.89	11.50	14.61	4.32	3.47	4.19	2.67	2.81	4.26	15.55	52.91	52.69	59.76	70.27	96.53	95.11	12.11	0.00
Apartments in buildings with 2–4 units	0.00	2.92	3.75	12.24	16.22	8.07	5.40	4.92	6.92	8.29	10.13	21.32	0.00	0.00	0.00	0.00	74.28	72.90	15.81	0.00
Apartments in buildings with 5 or more units	0.00	2.87	3.44	11.47	7.51	4.36	2.46	4.16	7.45	9.41	7.10	18.71	35.22	30.31	70.93	76.53	60.10	69.73	71.18	0.00
Mobile homes	0.00	3.34	4.66	14.84	10.44	8.02	4.83	6.38	11.91	12.18	19.77	34.83	25.96	25.82	46.92	39.51	78.76	78.76	0.00	0.00
Ownership of housing unit																				
Owned	0.87	1.11	1.24	5.20	4.21	1.94	1.32	1.37	1.89	1.98	2.19	5.62	7.13	7.66	9.28	15.48	23.14	23.61	82.11	50.33
Single-family	0.60	1.04	1.23	5.33	4.42	1.88	1.25	1.38	1.76	1.88	2.12	5.69	7.65	8.26	9.93	15.88	23.34	23.84	82.11	50.33
Apartments	11.27	12.88	14.20	26.52	24.03	15.47	13.16	14.15	14.55	16.05	15.26	20.06	15.97	15.97	0.00	0.00	0.00	0.00	0.00	0.00
Mobile homes	4.59	5.32	6.50	16.68	12.43	9.18	6.63	7.61	13.70	14.04	20.97	38.92	27.50	27.23	46.92	42.71	78.76	78.76	0.00	0.00
Rented ^g	2.25	3.11	3.38	6.87	6.95	3.93	3.21	3.97	4.67	5.38	5.51	13.74	21.74	23.97	41.97	32.95	34.57	39.89	51.56	0.00
Single-family	4.85	5.45	5.81	13.28	10.59	7.27	6.00	5.99	6.85	7.31	7.53	15.95	23.50	25.88	38.30	38.62	52.64	60.85	88.05	0.00
Apartments	2.02	2.90	3.29	7.96	8.53	4.75	3.10	4.26	6.87	7.90	7.71	19.24	39.00	33.01	70.93	76.53	49.32	54.49	58.82	0.00
Mobile homes	23.49	24.10	23.53	45.32	30.77	27.41	23.05	28.66	31.82	31.49	58.94	44.64	15.73	15.73	0.00	15.73	0.00	0.00	0.00	0.00
Year of construction																				
Before 1950	0.00	1.80	2.25	9.03	7.68	3.82	2.19	2.71	3.57	3.90	4.78	8.52	15.55	16.41	19.95	29.25	30.08	31.49	14.95	70.71
1950 to 1959	0.00	2.90	2.89	11.15	10.87	4.37	3.14	3.92	3.60	4.00	4.82	10.37	22.76	23.71	29.86	43.83	42.86	41.94	15.81	14.47
1960 to 1969	0.00	2.76	3.54	13.03	11.82	4.88	3.70	3.94	4.14	4.51	5.43	9.66	22.89	26.05	29.17	50.34	56.63	65.38	71.42	0.00
1970 to 1979	0.00	2.31	2.71	10.74	8.81	3.40	2.44	2.92	4.26	4.48	6.27	16.17	14.89	15.40	21.91	22.86	46.59	48.11	76.68	0.00
1980 to 1989	0.00	2.65	3.01	11.53	10.02	5.06	3.32	3.64	6.50	6.93	7.10	16.02	24.42	26.86	34.01	43.75	45.07	47.22	15.29	17.27
1990 to 1999	0.00	2.46	3.07	12.36	10.53	3.71	3.14	4.02	4.23	4.44	5.64	14.55	16.50	17.28	19.03	34.34	78.61	81.58	0.00	11.56

Relative standard errors (RSEs) for Table CE4.13 Annual household end-use expenditures by fuel in the Midwest—totals, 2020

	RSEs for total energy expenditures ^a																			
	RSEs for number of housing units																			
	Electricity					Natural gas					Propane				Fuel oil or kerosene					
Total Mid-west ^b	Total	Space heating ^c	Water heating	Air conditioning	Refrigerators	Other ^d	Total	Space heating ^c	Water heating	Other ^d	Total	Space heating ^c	Water heating	Other ^d	Total	Space heating ^c	Water heating	Other ^d		
All homes	0.00	0.75	0.90	4.30	3.16	1.55	0.96	1.17	1.62	1.71	2.06	5.24	6.56	7.12	9.35	14.39	19.79	20.84	44.12	50.33

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.

^a Consumption and expenditures for biomass (wood), coal, district steam, and solar thermal are excluded.

^b Total Midwest includes all primary occupied housing units in the Midwest Census Region. Vacant housing units, seasonal units, second homes, military houses, and group quarters are excluded.

^c Includes main (primary) and secondary space heating.

^d Includes end uses not shown in this table. A more detailed breakout of end uses is shown in the CE5 tables.

^e 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.

^f 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.

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^h 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.

ⁱ Some other fuel includes coal and district steam.