

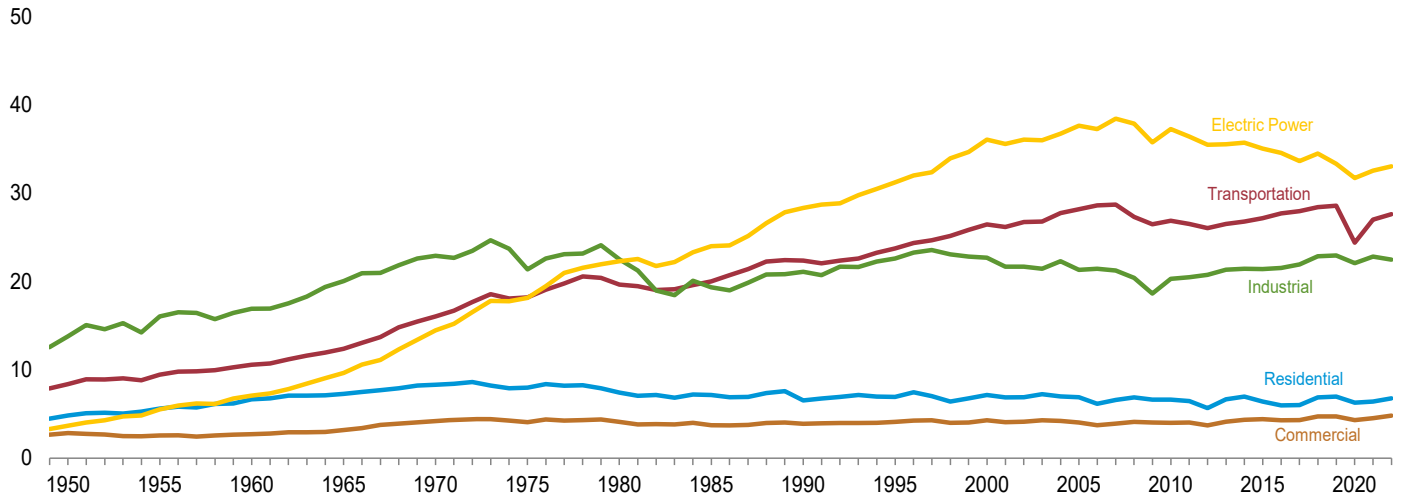
## **2. Energy Consumption By Sector**

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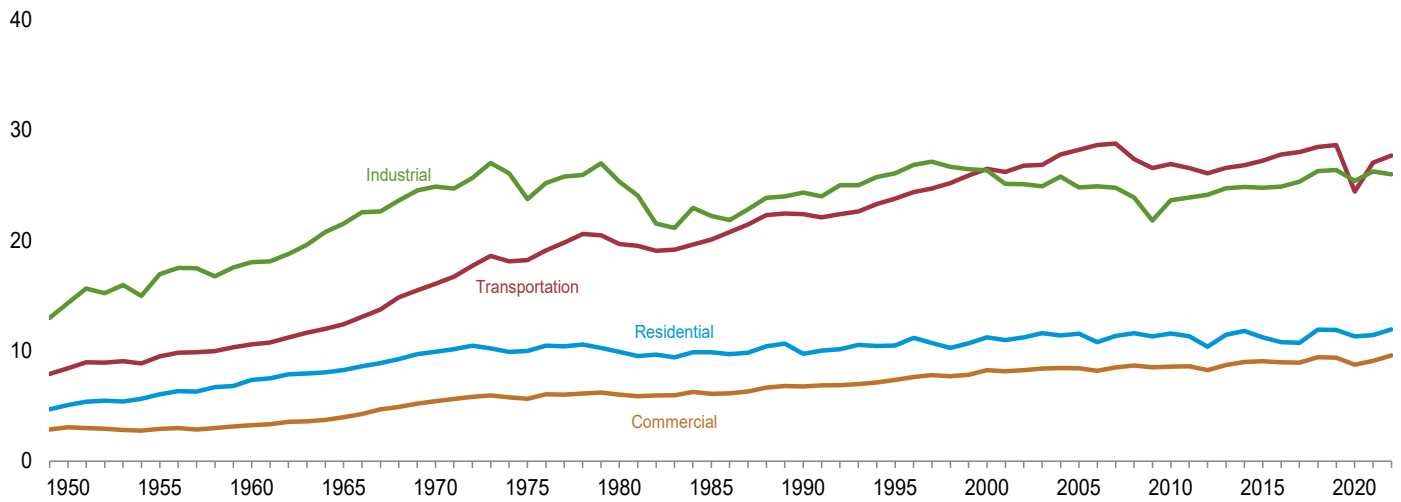
**Figure 2.1a Energy Consumption by Sector, 1949–2022**

(Quadrillion Btu)

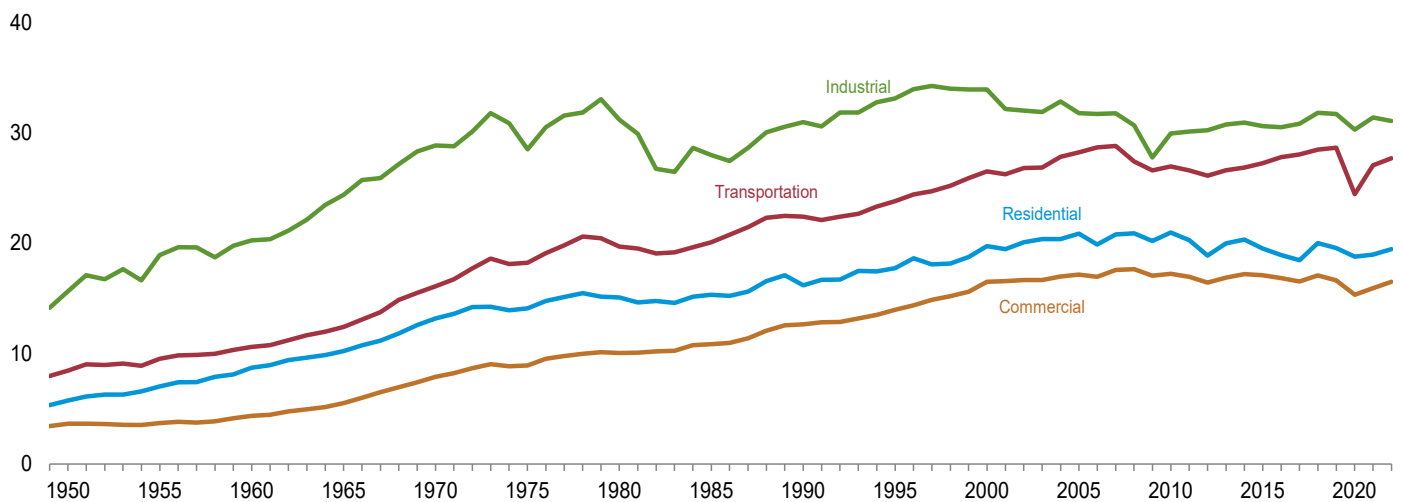
Primary Consumption by Sector



End-Use Consumption by End-Use Sector



Total Consumption by End-Use Sector



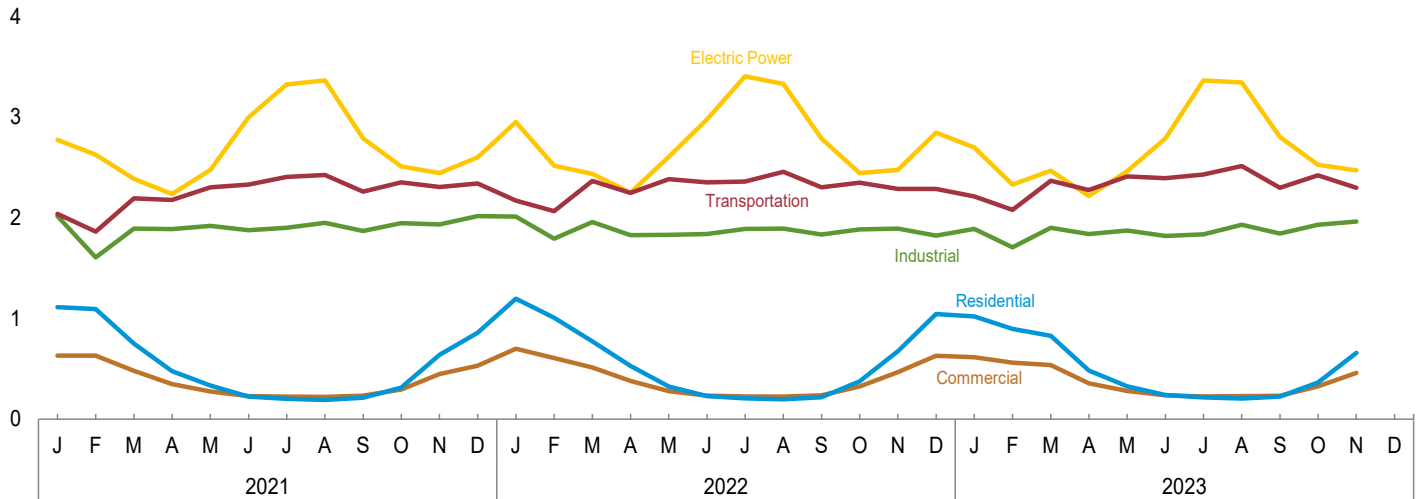
Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.

Source: Tables 2.1a–2.1b.

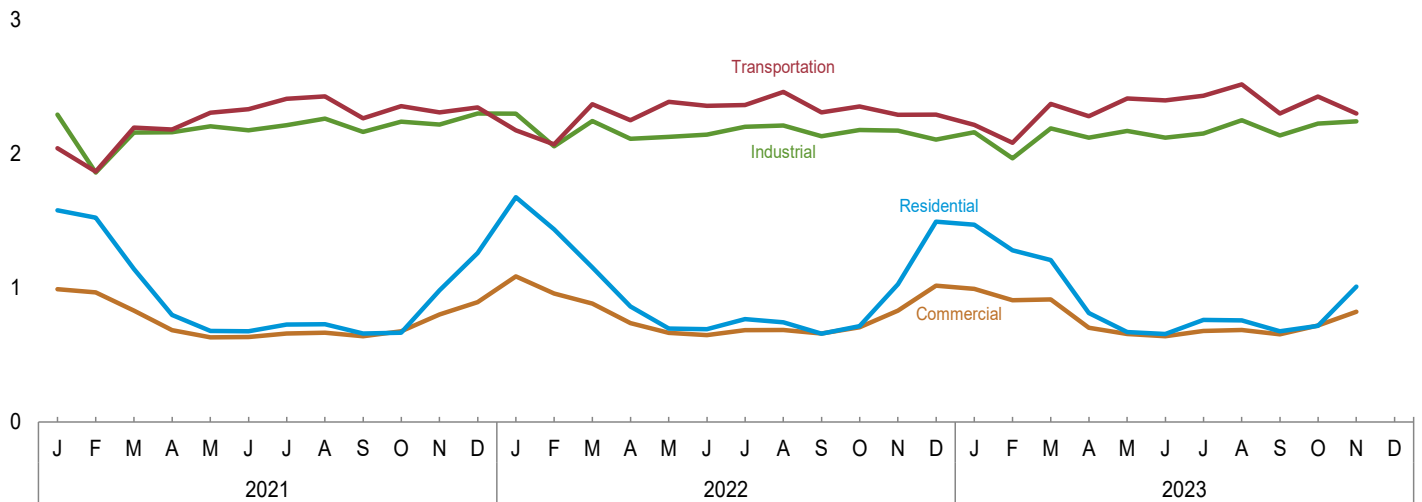
**Figure 2.1b Energy Consumption by Sector, Monthly**

(Quadrillion Btu)

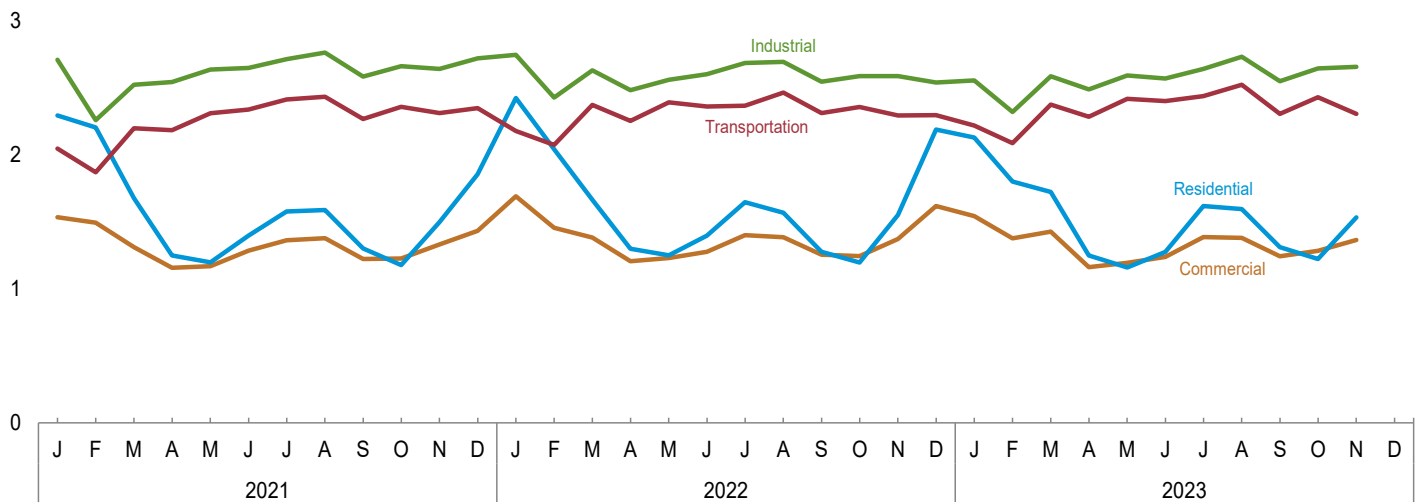
Primary Consumption by Sector



End-Use Consumption by End-Use Sector



Total Consumption by End-Use Sector



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.

Source: Tables 2.1a—2.1b.

**Table 2.1a Energy Consumption: Residential, Commercial, and Industrial Sectors**  
(Trillion Btu)

	End-Use Sectors														
	Residential					Commercial <sup>a</sup>					Industrial <sup>a</sup>				
	Primary <sup>b</sup>	Electricity <sup>c</sup>	End Use <sup>d</sup>	Electrical System Energy Losses <sup>e</sup>	Total <sup>f</sup>	Primary <sup>b</sup>	Electricity <sup>c</sup>	End Use <sup>d</sup>	Electrical System Energy Losses <sup>e</sup>	Total <sup>f</sup>	Primary <sup>b</sup>	Electricity <sup>c</sup>	End Use <sup>d</sup>	Electrical System Energy Losses <sup>e</sup>	Total <sup>f</sup>
1950 Total .....	4,830	246	5,076	661	5,736	2,834	225	3,059	604	3,663	13,820	500	14,319	1,340	15,659
1955 Total .....	5,608	438	6,046	990	7,036	2,561	350	2,911	791	3,702	16,046	887	16,933	2,005	18,938
1960 Total .....	6,651	687	7,339	1,387	8,726	2,723	543	3,266	1,096	4,362	16,923	1,107	18,030	2,234	20,264
1965 Total .....	7,280	993	8,273	1,950	10,223	3,177	789	3,966	1,549	5,514	20,063	1,948	21,526	2,873	24,399
1970 Total .....	8,323	1,591	9,914	3,264	13,178	4,237	1,201	5,438	2,464	7,902	22,918	1,948	24,866	3,995	28,862
1975 Total .....	7,990	2,007	9,997	4,103	14,100	4,059	1,598	5,657	3,267	8,924	21,378	2,346	23,725	4,797	28,522
1980 Total .....	7,440	2,448	9,888	5,194	15,082	4,105	1,906	6,011	4,044	10,055	22,527	2,781	25,308	5,900	31,209
1985 Total .....	7,149	2,709	9,858	5,486	15,344	3,732	2,351	6,084	4,762	10,845	19,363	2,855	22,218	5,782	28,000
1990 Total .....	6,552	3,153	9,705	6,501	16,206	3,892	2,860	6,753	5,898	12,650	21,100	3,226	24,326	6,652	30,978
1995 Total .....	6,934	3,557	10,491	7,256	17,747	4,099	3,252	7,352	6,634	13,985	22,622	3,455	26,077	7,048	33,125
2000 Total .....	7,156	4,069	11,225	8,507	19,732	4,277	3,956	8,233	8,271	16,504	22,721	3,631	26,352	7,592	33,945
2005 Total .....	6,901	4,638	11,538	9,340	20,879	4,051	4,351	8,401	8,762	17,163	21,322	3,477	24,799	7,003	31,803
2006 Total .....	6,154	4,611	10,765	9,119	19,884	3,745	4,435	8,180	8,769	16,949	21,436	3,451	24,886	6,823	31,710
2007 Total .....	6,588	4,750	11,338	9,472	20,811	3,920	4,560	8,479	9,092	17,571	21,273	3,507	24,780	6,993	31,773
2008 Total .....	6,887	4,711	11,598	9,296	20,894	4,096	4,559	8,655	8,996	17,651	20,443	3,444	23,888	6,797	30,685
2009 Total .....	6,634	4,657	11,291	8,918	20,208	4,050	4,459	8,509	8,540	17,049	18,657	3,130	21,787	5,995	27,782
2010 Total .....	6,635	4,933	11,568	9,419	20,987	4,014	4,539	8,553	8,666	17,219	20,317	3,314	23,631	6,328	29,958
2011 Total .....	6,465	4,855	11,319	8,967	20,286	4,051	4,531	8,583	8,370	16,952	20,494	3,382	23,876	6,247	30,123
2012 Total .....	5,672	4,690	10,362	8,510	18,871	3,702	4,528	8,230	8,216	16,446	20,765	3,363	24,128	6,103	30,230
2013 Total .....	6,669	4,759	11,428	8,554	19,983	4,134	4,562	8,696	8,200	16,897	21,357	3,362	24,719	6,043	30,762
2014 Total .....	6,976	4,801	11,778	8,560	20,338	4,356	4,614	8,969	8,226	17,195	21,449	3,404	24,853	6,068	30,921
2015 Total .....	6,423	4,791	11,214	8,306	19,520	4,404	4,643	9,047	8,050	17,097	21,411	3,366	24,777	5,836	30,613
2016 Total .....	5,968	4,815	10,783	8,146	18,929	4,281	4,665	8,945	7,893	16,838	21,549	3,333	24,882	5,639	30,520
2017 Total .....	6,017	4,704	10,721	7,751	18,471	4,318	4,616	8,934	7,606	16,540	21,951	3,358	25,309	5,534	30,843
2018 Total .....	6,885	5,013	11,897	8,126	20,023	4,715	4,715	9,429	7,643	17,072	22,864	3,414	26,278	5,535	31,813
2019 Total .....	6,974	4,914	11,889	7,686	19,575	4,732	4,643	9,375	7,263	16,638	22,946	3,420	26,366	5,349	31,716
2020 Total .....	6,296	4,997	11,293	7,502	18,795	4,335	4,393	8,728	6,595	15,322	22,103	3,272	25,376	4,913	30,288
<b>2021 January .....</b>	<b>1,112</b>	<b>466</b>	<b>1,578</b>	<b>713</b>	<b>2,292</b>	<b>633</b>	<b>357</b>	<b>990</b>	<b>545</b>	<b>1,535</b>	<b>2,020</b>	<b>272</b>	<b>2,292</b>	<b>416</b>	<b>2,709</b>
February .....	1,093	432	1,525	678	2,204	631	336	967	527	1,494	1,607	253	1,860	398	2,258
March .....	751	390	1,141	535	1,677	480	351	831	482	1,312	1,893	265	2,158	363	2,521
April .....	478	320	798	450	1,248	348	337	685	473	1,158	1,888	272	2,160	381	2,541
May .....	334	345	679	519	1,198	276	357	633	537	1,170	1,920	286	2,206	429	2,636
June .....	225	451	676	721	1,397	229	406	635	650	1,284	1,878	296	2,174	473	2,647
July .....	201	527	728	848	1,576	224	436	660	702	1,362	1,902	311	2,213	500	2,712
August .....	191	538	729	856	1,586	220	447	667	712	1,379	1,951	312	2,263	497	2,760
September .....	214	447	661	641	1,302	234	406	640	582	1,222	1,870	293	2,162	420	2,582
October .....	312	355	667	511	1,178	293	383	676	551	1,227	1,948	291	2,240	419	2,659
November .....	640	343	983	514	1,497	449	353	802	529	1,331	1,936	282	2,218	422	2,640
December .....	858	402	1,260	595	1,855	531	363	894	539	1,433	2,018	282	2,300	418	2,718
<b>Total .....</b>	<b>6,409</b>	<b>5,017</b>	<b>11,426</b>	<b>7,564</b>	<b>18,991</b>	<b>4,547</b>	<b>4,533</b>	<b>9,080</b>	<b>6,834</b>	<b>15,914</b>	<b>22,833</b>	<b>3,414</b>	<b>26,247</b>	<b>5,147</b>	<b>31,394</b>
<b>2022 January .....</b>	<b>1,197</b>	<b>479</b>	<b>1,676</b>	<b>747</b>	<b>2,423</b>	<b>699</b>	<b>388</b>	<b>R 1,087</b>	<b>604</b>	<b>1,690</b>	<b>R 2,012</b>	<b>287</b>	<b>2,299</b>	<b>446</b>	<b>2,745</b>
February .....	1,009	428	R 1,437	605	2,042	607	352	958	498	1,456	1,793	262	2,055	371	2,426
March .....	773	380	1,153	512	1,665	513	371	884	499	1,383	1,958	286	2,243	385	2,628
April .....	529	332	862	438	1,299	380	357	737	470	1,206	1,830	281	2,112	370	2,482
May .....	323	376	698	552	1,250	279	386	665	566	1,231	1,833	294	2,126	431	2,558
June .....	228	465	693	704	1,397	235	415	649	628	1,277	1,840	303	2,142	458	2,600
July .....	207	561	768	878	1,646	227	457	684	716	1,401	1,892	309	2,201	484	2,684
August .....	196	547	743	824	1,567	223	463	686	698	1,384	1,894	318	2,212	479	2,691
September .....	218	441	659	618	1,276	237	424	660	593	1,254	1,835	295	2,131	414	2,544
October .....	375	340	716	480	1,196	325	382	707	539	1,245	1,886	290	2,176	409	2,586
November .....	676	352	1,028	523	1,551	466	365	831	541	1,372	1,894	279	2,173	414	2,587
December .....	R 1,045	448	1,494	693	2,187	628	389	1,017	601	1,618	1,825	279	R 2,105	432	R 2,537
<b>Total .....</b>	<b>6,776</b>	<b>5,150</b>	<b>11,925</b>	<b>7,553</b>	<b>19,478</b>	<b>4,819</b>	<b>4,746</b>	<b>9,565</b>	<b>6,961</b>	<b>16,525</b>	<b>22,494</b>	<b>3,482</b>	<b>25,976</b>	<b>5,107</b>	<b>31,083</b>
<b>2023 January .....</b>	<b>R 1,021</b>	<b>451</b>	<b>1,472</b>	<b>657</b>	<b>2,129</b>	<b>616</b>	<b>377</b>	<b>993</b>	<b>549</b>	<b>1,542</b>	<b>R 1,891</b>	<b>269</b>	<b>2,160</b>	<b>393</b>	<b>2,553</b>
February .....	896	384	1,280	519	1,799	562	346	908	467	1,376	R 1,708	260	1,967	351	2,318
March .....	829	378	1,207	517	1,723	538	375	914	513	1,427	1,902	288	2,190	394	2,584
April .....	484	329	813	435	1,249	357	346	703	458	1,161	1,841	279	2,120	369	R 2,488
May .....	327	343	670	489	1,159	280	377	656	537	1,193	1,876	295	2,171	420	2,591
June .....	241	415	656	619	R 1,274	238	402	640	599	1,239	1,820	300	2,120	448	2,568
July .....	216	546	762	855	1,617	227	452	679	708	1,387	1,838	312	2,151	489	2,639
August .....	205	553	757	838	1,595	228	458	686	695	1,381	1,932	317	2,249	481	2,730
September .....	223	454	677	635	1,312	233	421	654	588	1,242	1,845	293	2,137	409	2,547
October .....	R 364	353	R 717	506	1,222	326	393	719	563	1,282	1,933	292	2,225	418	2,643
November .....	660	350	1,010	523	1,533	460	362	822	541	1,363	1,964	277	2,241	415	2,656
<b>11-Month Total ...</b>	<b>5,465</b>	<b>4,556</b>	<b>10,021</b>	<b>6,592</b>	<b>16,613</b>	<b>4,065</b>	<b>4,309</b>	<b>8,374</b>	<b>6,219</b>	<b>14,593</b>	<b>20,548</b>	<b>3,183</b>	<b>23,731</b>	<b>4,586</b>	<b>28,317</b>
<b>2022 11-Month Total ...</b>	<b>5,732</b>	<b>4,701</b>	<b>10,433</b>	<b>6,880</b>	<b>17,313</b>	<b>4,191</b>	<b>4,357</b>	<b>8,548</b>	<b>6,351</b>	<b>14,900</b>	<b>20,668</b>	<b>3,203</b>	<b>23,871</b>	<b>4,661</b>	<b>28,532</b>
<b>2021 11-Month Total ...</b>	<b>5,552</b>	<b>4,616</b>	<b>10,167</b>	<b>6,986</b>	<b>17,154</b>	<b>4,017</b>	<b>4,169</b>	<b>8,186</b>	<b>6,288</b>	<b>14,475</b>	<b>20,814</b>	<b>3,132</b>	<b>23,946</b>	<b>4,718</b>	<b>28,664</b>

<sup>a</sup> Includes energy consumed at combined-heat-and-power (CHP) and electricity-only plants within the sector.

<sup>b</sup> Energy consumed in the form that it is first accounted for, before any transformation to secondary or tertiary forms of energy. See "Primary Energy Consumption" in Glossary.

<sup>c</sup> Electricity sold to the sector. See "Electricity Sales to Ultimate Customers" in Glossary.

<sup>d</sup> Sum of "Primary" and "Electricity." See "End-Use Energy Consumption" in Glossary.

<sup>e</sup> Calculated as the difference between primary energy consumed by the electric power sector and the energy content of electricity sales to ultimate customers sent to the end-use sectors. Allocated proportionally to the electricity sales to ultimate customers in each end-use sector. See Note 1, "Electrical System Energy Losses,"

at end of section.

<sup>f</sup> Equal to end-use energy consumption plus electrical system energy losses.

R=Revised.

Notes: • Data are estimates. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 2, "Other Energy Losses," at end of section. • See Note 3, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption>

**Table 2.1b Energy Consumption: Transportation Sector, Total End-Use Sectors, and Electric Power Sector (Trillion Btu)**

	End-Use Sectors										Electric Power Sector <sup>a</sup>	Primary Total <sup>h</sup>
	Transportation					Total						
	Primary <sup>b</sup>	Elec- tricity <sup>c</sup>	End Use <sup>d</sup>	Electrical System Energy Losses <sup>e</sup>	Total <sup>f</sup>	Primary <sup>b</sup>	Elec- tricity <sup>c</sup>	End Use <sup>d</sup>	Electrical System Energy Losses <sup>e</sup>	Total <sup>g</sup>	Primary <sup>b</sup>	
1950 Total .....	8,383	23	8,407	62	8,469	29,867	994	30,861	2,666	33,527	3,661	33,527
1955 Total .....	9,474	20	9,494	45	9,539	33,690	1,695	35,385	3,830	39,215	5,525	39,215
1960 Total .....	10,560	10	10,570	21	10,591	36,856	2,348	39,204	4,738	43,942	7,086	43,942
1965 Total .....	12,399	10	12,409	20	12,428	42,919	3,254	46,173	6,392	52,565	9,646	52,565
1970 Total .....	16,062	11	16,073	22	16,094	51,540	4,751	56,291	9,745	66,036	14,495	66,036
1975 Total .....	18,211	10	18,221	21	18,241	51,638	5,961	57,599	12,188	69,787	18,149	69,788
1980 Total .....	19,659	11	19,670	23	19,694	53,731	7,146	60,878	15,162	76,040	22,309	76,038
1985 Total .....	20,042	14	20,056	29	20,084	50,285	7,929	58,214	16,059	74,273	23,988	74,268
1990 Total .....	22,366	16	22,382	33	22,415	53,910	9,255	63,165	19,084	82,250	28,340	82,256
1995 Total .....	23,757	17	23,774	35	23,808	57,412	10,281	67,694	20,973	88,666	31,254	88,668
2000 Total .....	26,456	18	26,474	38	26,512	60,610	11,674	72,284	24,409	96,693	36,083	96,694
2005 Total .....	28,179	26	28,205	52	28,257	60,452	12,491	72,944	25,158	98,101	37,649	98,101
2006 Total .....	28,618	25	28,643	50	28,693	59,953	12,522	72,474	24,761	97,235	37,283	97,235
2007 Total .....	28,727	28	28,755	56	28,811	60,508	12,845	73,353	25,613	98,966	38,458	98,965
2008 Total .....	27,339	26	27,366	52	27,417	58,765	12,740	71,505	25,141	96,646	37,881	96,647
2009 Total .....	26,510	27	26,536	51	26,587	55,851	12,272	68,123	23,503	91,626	35,775	91,626
2010 Total .....	26,894	26	26,920	50	26,970	57,860	12,812	70,672	24,463	95,135	37,275	95,142
2011 Total .....	26,523	26	26,549	48	26,598	57,533	12,794	70,327	23,632	93,959	36,426	93,966
2012 Total .....	26,057	25	26,082	45	26,127	56,195	12,606	68,801	22,874	91,675	35,480	91,677
2013 Total .....	26,541	26	26,567	47	26,614	58,701	12,709	71,410	22,845	94,255	35,554	94,253
2014 Total .....	26,802	26	26,828	47	26,875	59,583	12,845	72,428	22,902	95,329	35,747	95,335
2015 Total .....	27,182	26	27,208	45	27,253	59,420	12,826	72,246	22,237	94,483	35,063	94,484
2016 Total .....	27,741	26	27,767	43	27,810	59,539	12,838	72,376	21,720	94,097	34,558	94,092
2017 Total .....	27,979	26	28,005	42	28,047	60,265	12,704	72,969	20,932	93,901	33,636	93,902
2018 Total .....	28,435	26	28,461	42	28,504	62,898	13,168	76,066	21,346	97,412	34,514	97,405
2019 Total .....	28,602	26	28,628	41	28,669	63,255	13,004	76,259	20,339	96,598	33,343	96,603
2020 Total .....	24,394	22	24,417	34	24,450	57,128	12,685	69,813	19,043	88,856	31,728	88,852
2021 January .....	2,040	2	2,042	3	2,045	5,806	1,097	6,903	1,678	8,581	2,775	8,579
February .....	1,865	2	1,867	3	1,869	5,196	1,023	6,219	1,607	7,825	2,629	7,827
March .....	2,194	2	2,196	3	2,198	5,318	1,008	6,325	1,382	7,708	2,390	7,703
April .....	2,179	2	2,181	2	2,183	4,893	931	5,824	1,306	7,130	2,237	7,124
May .....	2,305	2	2,307	2	2,309	4,835	990	5,825	1,488	7,313	2,478	7,310
June .....	2,332	2	2,334	3	2,337	4,665	1,155	5,819	1,846	7,666	3,001	7,669
July .....	2,408	2	2,410	3	2,413	4,736	1,276	6,011	2,052	8,063	3,328	8,070
August .....	2,427	2	2,428	3	2,432	4,788	1,300	6,088	2,068	8,156	3,368	8,163
September .....	2,262	2	2,264	3	2,267	4,580	1,148	5,728	1,645	7,373	2,793	7,375
October .....	2,353	2	2,355	3	2,357	4,907	1,031	5,938	1,483	7,421	2,514	7,419
November .....	2,307	2	2,308	3	2,311	5,332	980	6,311	1,467	7,778	2,447	7,774
December .....	2,343	2	2,345	3	2,348	5,750	1,049	6,799	1,554	8,354	2,603	8,349
Total .....	27,015	22	27,037	33	27,070	60,804	12,986	73,790	19,578	93,368	32,564	93,363
2022 January .....	2,172	2	2,174	3	2,177	6,080	1,155	7,235	1,800	9,035	2,955	9,036
February .....	2,068	2	2,070	3	2,073	5,476	1,044	6,520	1,477	7,996	2,520	7,995
March .....	2,368	2	2,370	3	2,372	5,612	1,038	6,650	1,399	8,049	2,437	8,044
April .....	2,248	2	2,250	2	2,252	4,987	972	5,960	1,280	7,239	2,252	7,235
May .....	2,385	2	2,387	3	2,390	4,820	1,057	5,877	1,552	7,429	2,609	7,427
June .....	2,355	2	2,357	3	2,359	4,658	1,184	5,842	1,793	7,635	2,977	7,637
July .....	2,361	2	2,363	3	2,366	4,688	1,328	6,016	2,081	8,097	3,409	8,103
August .....	2,459	2	2,461	3	2,463	4,773	1,329	6,102	2,003	8,105	3,333	8,111
September .....	2,306	2	2,308	3	2,310	4,596	1,162	5,758	1,627	7,385	2,789	7,386
October .....	2,352	2	2,354	3	2,356	4,938	1,014	5,952	1,431	7,383	2,445	7,380
November .....	2,288	2	2,290	3	2,293	5,325	997	6,323	1,480	7,803	2,478	7,800
December .....	2,290	2	2,292	3	2,295	5,789	1,118	6,907	1,730	8,637	2,848	8,636
Total .....	27,652	23	27,674	33	27,707	61,741	13,400	75,140	19,653	94,794	33,053	94,791
2023 January .....	2,213	2	2,215	3	2,218	5,741	1,099	6,840	1,601	8,441	2,700	8,438
February .....	2,080	2	2,082	3	2,085	5,247	991	6,238	1,339	7,577	2,331	7,572
March .....	2,370	2	2,371	3	2,374	5,638	1,043	6,682	1,427	8,108	2,470	8,102
April .....	2,278	2	2,280	2	2,282	4,960	956	5,916	1,264	7,180	2,220	7,174
May .....	2,412	2	2,413	3	2,416	4,895	1,016	5,911	1,448	7,359	2,464	7,355
June .....	2,395	2	2,397	3	2,399	4,693	1,119	5,812	1,669	7,481	2,788	7,481
July .....	2,431	2	2,433	3	2,437	4,712	1,313	6,025	2,055	8,080	3,368	8,084
August .....	2,516	2	2,518	3	2,521	4,880	1,330	6,211	2,016	8,227	3,347	8,231
September .....	2,299	2	2,301	3	2,304	4,600	1,170	5,769	1,636	7,406	2,806	7,406
October .....	2,424	2	2,426	3	2,429	5,047	1,040	6,087	1,489	7,576	2,530	7,573
November .....	2,299	2	2,301	3	2,304	5,383	991	6,374	1,482	7,856	2,474	7,853
11-Month Total ...	25,717	22	25,738	31	25,769	55,794	12,069	67,864	17,428	85,292	29,497	85,268
2022 11-Month Total ...	25,362	20	25,382	30	25,412	55,953	12,281	68,234	17,923	86,157	30,204	86,154
2021 11-Month Total ...	24,672	20	24,692	30	24,722	55,055	11,937	66,992	18,023	85,015	29,960	85,014

<sup>a</sup> Includes NAICS 22 electricity-only and CHP plants whose primary business is to sell electricity, or electricity and heat, to the public. Through 1988, data are for electric utilities only. For 1989 forward, data are for electric utilities and independent power producers.

<sup>b</sup> Energy consumed in the form that it is first accounted for, before any transformation to secondary or tertiary forms of energy. See "Primary Energy Consumption" in Glossary.

<sup>c</sup> Electricity sold to the sector. See "Electricity Sales to Ultimate Customers" in Glossary.

<sup>d</sup> Sum of "Primary" and "Electricity." See "End-Use Energy Consumption" in Glossary.

<sup>e</sup> Calculated as the difference between primary energy consumed by the electric power sector and the energy content of electricity sales to ultimate customers sent to the end-use sectors. Allocated proportionally to the electricity sales to ultimate customers in each end-use sector. See Note 1, "Electrical System Energy Losses," at end of section.

<sup>f</sup> Equal to end-use energy consumption plus electrical system energy losses.

<sup>g</sup> Equal to the sum of total energy consumption in the four end-use sectors, which does not equal total primary energy consumption due to the use of sector-specific conversion factors for coal and natural gas.

<sup>h</sup> Total primary energy consumption. See Table 1.3.

R=Revised.

Notes: • Data are estimates, except for the electric power sector. • See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 2, "Other Energy Losses," at end of section. • See Note 3, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

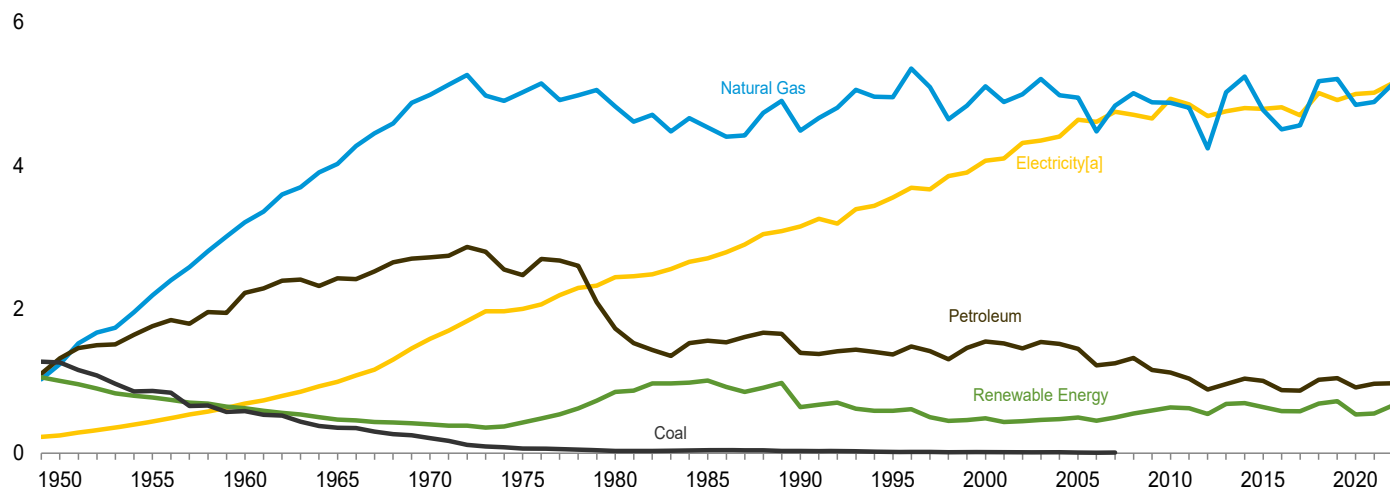
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: • **End-Use Sectors:** Tables 2.2–2.5. • **Electric Power Sector:** Table 2.6. • **Primary Total:** Table 1.3.

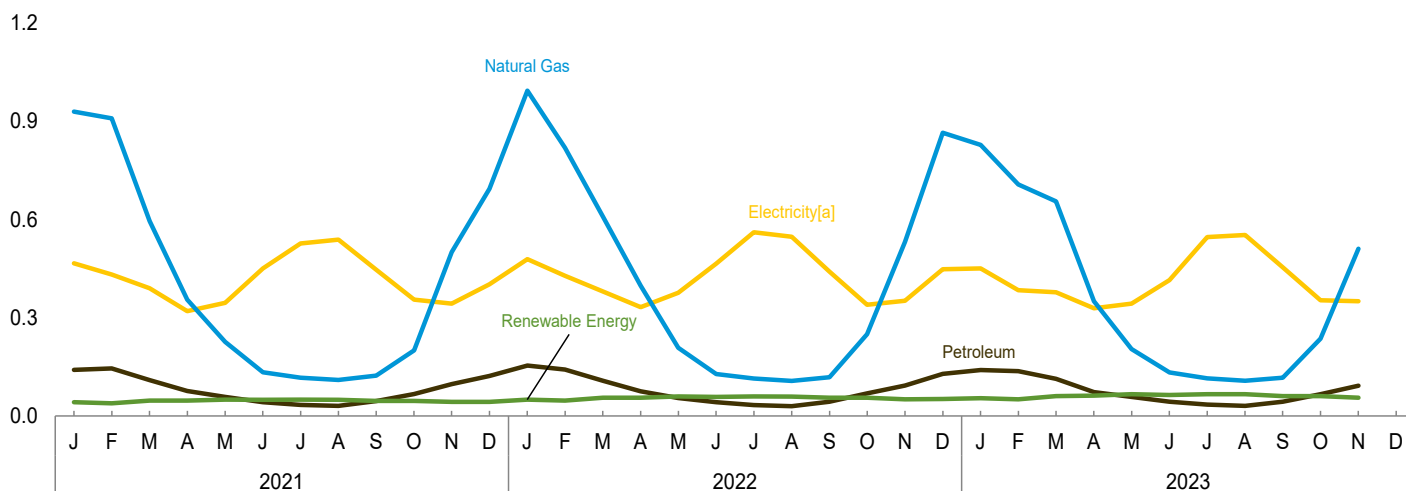
**Figure 2.2 Residential Sector Energy Consumption**

(Quadrillion Btu)

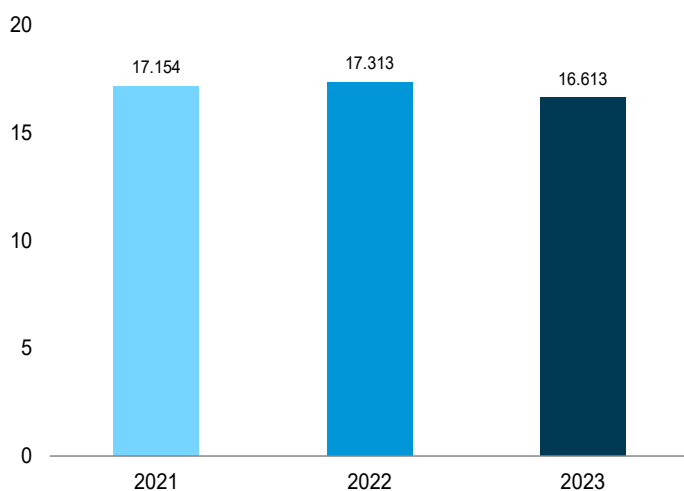
By Major Source, 1949–2022



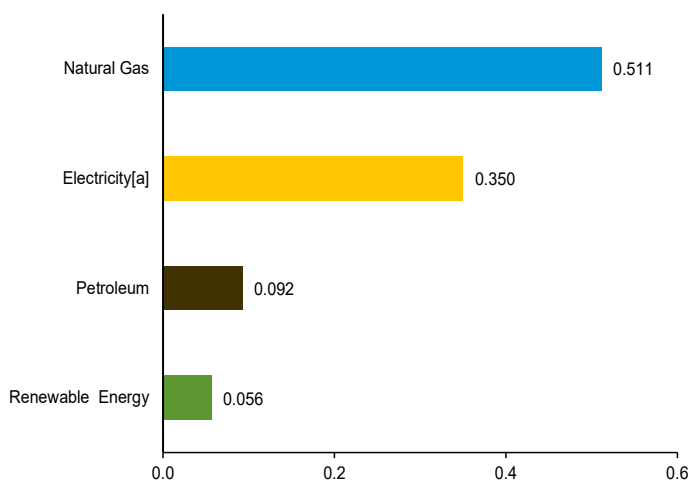
By Major Source, Monthly



Total, January–November



By Major Source, November 2023



[a] Electricity sales to ultimate customers.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.

Source: Table 2.2.

**Table 2.2 Residential Sector Energy Consumption**  
(Trillion Btu)

	End-Use Energy Consumption <sup>a</sup>											Electrical System Energy Losses <sup>g</sup>	Total
	Primary Consumption <sup>b</sup>								Elec- tricity <sup>i</sup>	Total End Use			
	Fossil Fuels				Renewable Energy <sup>c</sup>								
	Coal	Natural Gas <sup>d</sup>	Petro- leum	Total	Geo- thermal	Solar <sup>e</sup>	Bio- mass	Total					
								Total Primary					
1950 Total .....	1,261	1,240	1,322	3,824	NA	NA	1,006	1,006	4,830	246	5,076	661	5,736
1955 Total .....	867	2,198	1,767	4,833	NA	NA	775	775	5,608	438	6,046	990	7,036
1960 Total .....	585	3,212	2,228	6,025	NA	NA	627	627	6,651	687	7,339	1,387	8,726
1965 Total .....	352	4,028	2,432	6,812	NA	NA	468	468	7,280	993	8,273	1,950	10,223
1970 Total .....	209	4,987	2,726	7,922	NA	NA	401	401	8,323	1,591	9,914	3,264	13,178
1975 Total .....	63	5,023	2,479	7,565	NA	NA	425	425	7,990	2,007	9,997	4,103	14,100
1980 Total .....	31	4,825	1,734	6,590	NA	NA	850	850	7,440	2,448	9,888	5,194	15,082
1985 Total .....	39	4,534	1,566	6,139	NA	NA	1,010	1,010	7,149	2,709	9,858	5,486	15,344
1990 Total .....	31	4,487	1,395	5,912	6	55	580	640	6,552	3,153	9,705	6,501	16,206
1995 Total .....	17	4,954	1,374	6,345	7	63	520	589	6,934	3,557	10,491	7,256	17,747
2000 Total .....	11	5,105	1,554	6,670	9	57	420	486	7,156	4,069	11,225	8,507	19,732
2005 Total .....	8	4,946	1,450	6,405	16	49	430	495	6,901	4,638	11,538	9,340	20,879
2006 Total .....	6	4,476	1,222	5,704	18	51	380	450	6,154	4,611	10,765	9,119	19,884
2007 Total .....	8	4,835	1,249	6,092	22	53	420	495	6,588	4,750	11,338	9,472	20,811
2008 Total .....	NA	5,010	1,325	6,335	26	56	470	552	6,887	4,711	11,598	9,296	20,894
2009 Total .....	NA	4,883	1,158	6,041	33	56	504	593	6,634	4,657	11,291	8,918	20,208
2010 Total .....	NA	4,878	1,120	5,999	37	59	541	636	6,635	4,933	11,568	9,419	20,987
2011 Total .....	NA	4,805	1,034	5,838	40	62	524	626	6,465	4,855	11,319	8,967	20,286
2012 Total .....	NA	4,242	886	5,128	40	66	438	544	5,672	4,690	10,362	8,510	18,871
2013 Total .....	NA	5,023	963	5,986	40	72	572	683	6,669	4,759	11,428	8,554	19,983
2014 Total .....	NA	5,242	1,036	6,279	40	79	579	697	6,976	4,801	11,778	8,560	20,338
2015 Total .....	NA	4,777	1,007	5,784	40	87	513	639	6,423	4,791	11,214	8,306	19,520
2016 Total .....	NA	4,506	878	5,384	40	100	445	584	5,968	4,815	10,783	8,146	18,929
2017 Total .....	NA	4,563	871	5,435	40	113	430	582	6,017	4,704	10,721	7,751	18,471
2018 Total .....	NA	5,174	1,022	6,197	40	123	525	688	6,885	5,013	11,897	8,126	20,023
2019 Total .....	NA	5,208	1,045	6,253	40	136	546	721	6,974	4,914	11,889	7,686	19,575
2020 Total .....	NA	4,846	914	5,760	40	151	345	536	6,296	4,997	11,293	7,502	18,795
2021 January .....	NA	929	141	1,070	3	9	29	42	1,112	466	1,578	713	2,292
February .....	NA	909	145	1,054	3	10	26	39	1,093	432	1,525	678	2,204
March .....	NA	595	109	704	3	14	29	47	751	390	1,141	535	1,677
April .....	NA	355	76	430	3	16	28	47	478	320	798	450	1,248
May .....	NA	226	58	284	3	17	29	50	334	345	679	519	1,198
June .....	NA	134	42	176	3	18	28	49	225	451	676	721	1,397
July .....	NA	117	34	151	3	18	29	50	201	527	728	848	1,576
August .....	NA	110	31	142	3	17	29	49	191	538	729	856	1,586
September .....	NA	123	45	167	3	15	28	46	214	447	661	641	1,302
October .....	NA	200	67	267	3	13	29	46	312	355	667	511	1,178
November .....	NA	500	97	597	3	11	28	43	640	343	983	514	1,497
December .....	NA	694	122	815	3	10	29	43	858	402	1,260	595	1,855
Total .....	NA	4,889	967	5,856	40	169	344	553	6,409	5,017	11,426	7,564	18,991
2022 January .....	NA	993	154	1,146	3	11	36	50	1,197	479	1,676	747	2,423
February .....	NA	819	142	961	3	12	32	47	1,009	428	1,437	605	2,042
March .....	NA	609	108	717	3	17	36	56	773	380	1,153	512	1,665
April .....	NA	398	75	473	3	18	35	56	529	332	862	438	1,299
May .....	NA	208	55	263	3	20	36	60	323	376	698	552	1,250
June .....	NA	128	42	170	3	20	35	58	228	465	693	704	1,397
July .....	NA	114	33	147	3	21	36	60	207	561	768	878	1,646
August .....	NA	107	30	137	3	20	36	59	196	547	743	824	1,567
September .....	NA	118	44	162	3	18	35	56	218	441	659	618	1,276
October .....	NA	250	69	319	3	17	36	56	375	340	716	480	1,196
November .....	NA	532	93	625	3	13	35	51	676	352	1,028	523	1,551
December .....	NA	865	129	994	3	12	36	52	1,045	448	1,494	693	2,187
Total .....	NA	5,140	974	6,114	40	200	422	662	6,776	5,150	11,925	7,553	19,478
2023 January .....	NA	828	140	967	3	13	38	54	1,021	451	1,472	657	2,129
February .....	NA	707	137	845	3	14	35	51	896	384	1,280	519	1,799
March .....	NA	655	113	768	3	19	38	61	829	378	1,207	517	1,723
April .....	NA	350	73	422	3	21	37	62	484	329	813	435	1,249
May .....	NA	204	58	261	3	24	38	66	327	343	670	489	1,159
June .....	NA	133	44	177	3	24	37	64	241	415	656	619	1,274
July .....	NA	115	35	150	3	24	38	66	216	546	762	855	1,617
August .....	NA	108	31	139	3	24	38	66	205	553	757	838	1,595
September .....	NA	117	44	162	3	21	37	61	223	454	677	635	1,312
October .....	NA	236	66	302	3	20	38	61	364	353	717	506	1,222
November .....	NA	511	92	603	3	16	37	56	660	350	1,010	523	1,533
11-Month Total ...	NA	3,965	831	4,796	36	220	412	668	5,465	4,556	10,021	6,592	16,613
2022 11-Month Total ...	NA	4,276	845	5,121	36	187	387	610	5,732	4,701	10,433	6,880	17,313
2021 11-Month Total ...	NA	4,196	846	5,042	36	159	315	510	5,552	4,616	10,167	6,986	17,154

<sup>a</sup> Sum of "Total Primary" and "Electricity." See "End-Use Energy Consumption" in Glossary.

<sup>b</sup> Energy consumed in the form that it is first accounted for, before any transformation to secondary or tertiary forms of energy. See "Primary Energy Consumption" in Glossary.

<sup>c</sup> See Table 10.2a for notes on series components.

<sup>d</sup> Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

<sup>e</sup> Includes small-scale solar photovoltaic (PV) electricity and solar thermal energy in the residential sector. See Tables 10.2a and 10.5.

<sup>f</sup> Electricity sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

<sup>g</sup> Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity sales to ultimate customers.

Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales to ultimate customers. See Note 1, "Electrical System Energy Losses," at end of section.

R=Revised. NA=Not available.

Notes: • Data are estimates, except for electricity sales to ultimate customers. • See Note 2, "Other Energy Losses," at end of section. • See Note 3, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

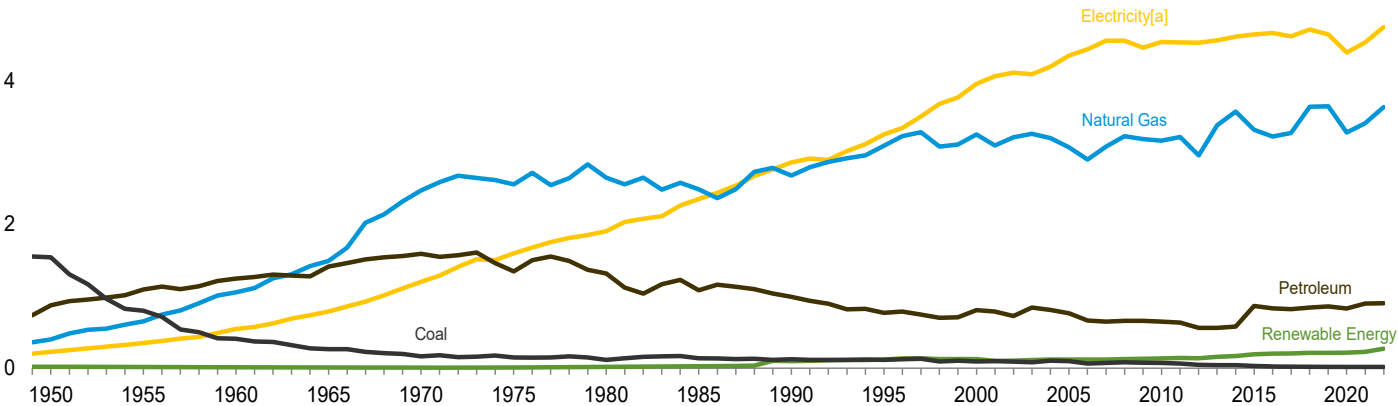
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

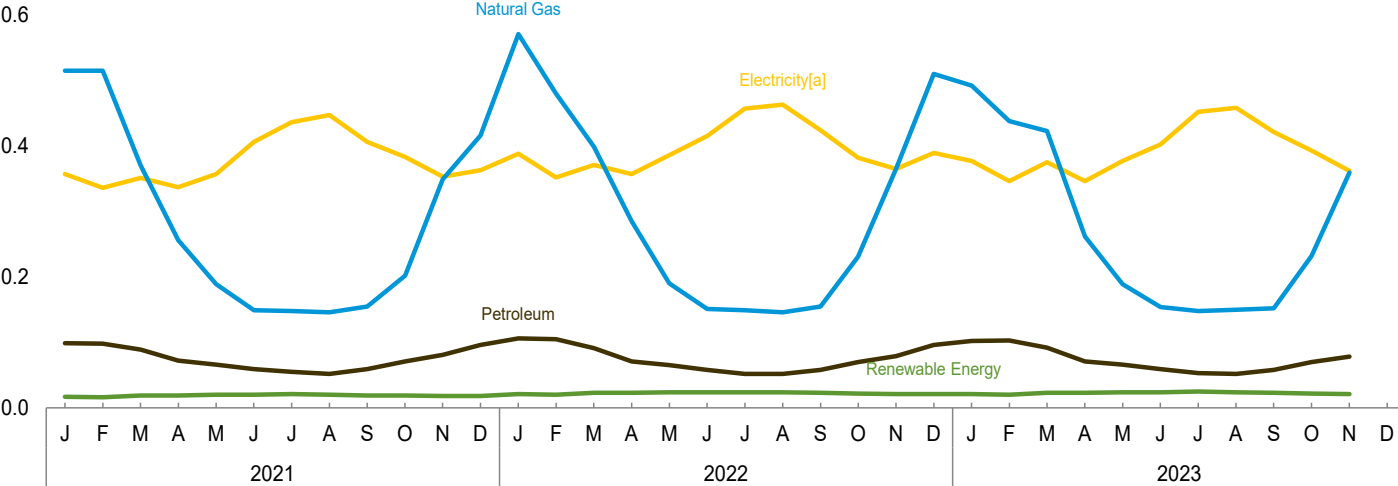
Figure 2.3 Commercial Sector Energy Consumption  
(Quadrillion Btu)

By Major Source, 1949–2022

6

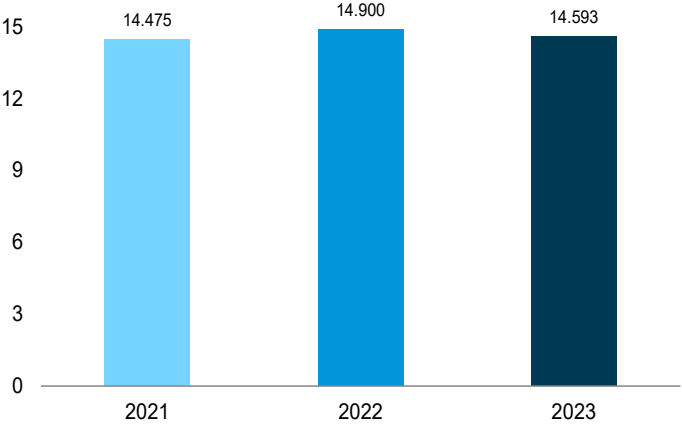


By Major Source, Monthly

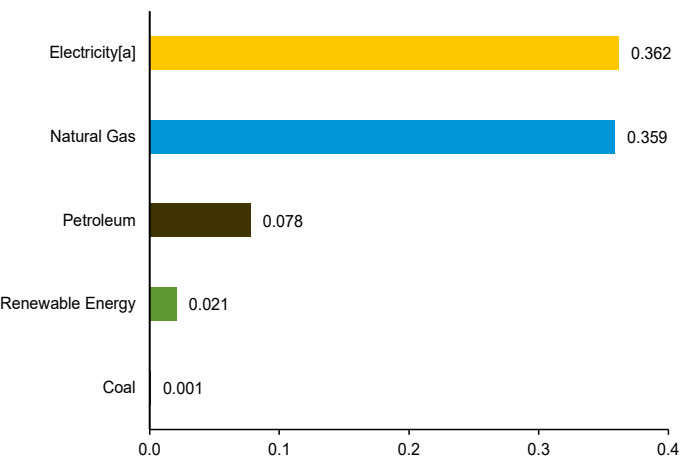


Total, January–November

18



By Major Source, November 2023



[a] Electricity sales to ultimate customers.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.

Source: Table 2.3.

**Table 2.3 Commercial Sector Energy Consumption**  
(Trillion Btu)

	End-Use Energy Consumption <sup>a</sup>													Electrical System Energy Losses <sup>i</sup>	Total
	Primary Consumption <sup>b</sup>										Total Primary	Elec- tricity <sup>h</sup>	Total End Use		
	Fossil Fuels				Renewable Energy <sup>c</sup>										
	Coal	Natural Gas <sup>d</sup>	Petro- leum <sup>e</sup>	Total	Hydro- electric Power <sup>f</sup>	Geo- thermal	Solar <sup>g</sup>	Wind	Bio- mass	Total					
1950 Total .....	1,542	401	872	2,815	NA	NA	NA	NA	19	19	2,834	225	3,059	604	3,663
1955 Total .....	801	651	1,095	2,547	NA	NA	NA	NA	15	15	2,561	350	2,911	791	3,702
1960 Total .....	407	1,056	1,248	2,711	NA	NA	NA	NA	12	12	2,723	543	3,266	1,096	4,362
1965 Total .....	265	1,490	1,413	3,168	NA	NA	NA	NA	9	9	3,177	789	3,966	1,549	5,514
1970 Total .....	165	2,473	1,592	4,229	NA	NA	NA	NA	8	8	4,237	1,201	5,438	2,464	7,902
1975 Total .....	147	2,558	1,346	4,051	NA	NA	NA	NA	8	8	4,059	1,598	5,657	3,267	8,924
1980 Total .....	115	2,651	1,318	4,084	NA	NA	NA	NA	21	21	4,105	1,906	6,011	4,044	10,055
1985 Total .....	137	2,488	1,083	3,708	NA	NA	NA	NA	24	24	3,732	2,351	6,084	4,762	10,845
1990 Total .....	124	2,680	991	3,795	(s)	3	(s)	—	94	97	3,892	2,860	6,753	5,898	12,650
1995 Total .....	117	3,096	769	3,982	(s)	5	(s)	—	113	118	4,099	3,252	7,352	6,634	13,985
2000 Total .....	92	3,252	807	4,150	(s)	8	(s)	—	119	127	4,277	3,956	8,233	8,271	16,504
2005 Total .....	97	3,073	761	3,931	(s)	14	1	—	105	120	4,051	4,351	8,401	8,762	17,163
2006 Total .....	65	2,902	661	3,627	(s)	14	1	—	103	118	3,745	4,435	8,180	8,769	16,949
2007 Total .....	70	3,085	646	3,801	(s)	14	1	—	103	119	3,920	4,560	8,479	9,092	17,571
2008 Total .....	81	3,228	660	3,970	(s)	15	2	—	109	126	4,096	4,559	8,655	8,996	17,651
2009 Total .....	73	3,187	659	3,919	(s)	17	3	(s)	112	131	4,050	4,459	8,509	8,540	17,049
2010 Total .....	70	3,165	647	3,881	(s)	19	4	(s)	111	134	4,014	4,539	8,553	8,666	17,219
2011 Total .....	62	3,216	632	3,910	(s)	20	7	(s)	115	141	4,051	4,531	8,583	8,370	16,952
2012 Total .....	44	2,960	560	3,563	(s)	20	11	(s)	108	139	3,702	4,528	8,230	8,216	16,446
2013 Total .....	41	3,380	558	3,979	(s)	20	15	(s)	120	155	4,134	4,562	8,696	8,200	16,897
2014 Total .....	40	3,572	578	4,190	(s)	20	19	(s)	127	166	4,356	4,614	8,969	8,226	17,195
2015 Total .....	31	3,316	864	4,211	(s)	20	21	(s)	152	193	4,404	4,643	9,047	8,050	17,097
2016 Total .....	24	3,224	832	4,079	1	20	23	(s)	158	201	4,281	4,665	8,945	7,893	16,838
2017 Total .....	21	3,273	820	4,113	1	20	28	(s)	156	205	4,318	4,616	8,934	7,606	16,540
2018 Total .....	19	3,638	845	4,502	1	20	35	1	156	213	4,715	4,715	9,429	7,643	17,072
2019 Total .....	17	3,647	857	4,521	1	21	40	1	149	211	4,732	4,643	9,375	7,263	16,638
2020 Total .....	15	3,279	827	4,120	1	21	46	1	147	215	4,335	4,393	8,728	6,595	15,322
2021 January .....	2	515	99	616	(s)	2	3	(s)	12	17	633	357	990	545	1,535
February .....	2	515	98	615	(s)	2	3	(s)	11	16	631	336	967	527	1,494
March .....	1	370	89	461	(s)	2	5	(s)	13	19	480	351	831	482	1,312
April .....	1	256	72	329	(s)	2	5	(s)	12	19	348	337	685	473	1,158
May .....	1	189	66	256	(s)	2	5	(s)	12	20	276	357	633	537	1,170
June .....	1	149	59	209	(s)	2	6	(s)	12	20	229	406	635	650	1,284
July .....	1	148	55	203	(s)	2	6	(s)	13	21	224	436	660	702	1,362
August .....	1	146	52	199	(s)	2	5	(s)	13	20	220	447	667	712	1,379
September .....	1	155	59	215	(s)	2	5	(s)	12	19	234	406	640	582	1,222
October .....	1	202	71	275	(s)	2	4	(s)	13	19	293	383	676	551	1,227
November .....	1	349	81	431	(s)	2	3	(s)	12	18	449	353	802	529	1,331
December .....	1	416	96	513	(s)	2	3	(s)	13	18	531	363	894	539	1,433
Total .....	15	3,409	898	4,322	1	21	54	1	149	225	4,547	4,533	9,080	6,834	15,914
2022 January .....	2	571	106	678	(s)	2	4	(s)	15	21	699	388	1,087	604	1,690
February .....	2	480	105	587	(s)	2	4	(s)	14	20	607	352	958	498	1,456
March .....	1	399	91	491	(s)	2	5	(s)	15	23	513	371	884	499	1,383
April .....	1	285	71	357	(s)	2	6	(s)	15	23	380	357	737	470	1,206
May .....	1	190	65	255	(s)	2	6	(s)	16	24	279	386	665	566	1,231
June .....	1	151	58	211	(s)	2	6	(s)	16	24	235	415	649	628	1,277
July .....	1	149	52	203	(s)	2	7	(s)	16	24	227	457	684	716	1,401
August .....	1	146	52	199	(s)	2	6	(s)	16	24	223	463	686	698	1,384
September .....	1	155	58	214	(s)	2	6	(s)	15	23	237	424	660	593	1,254
October .....	1	231	70	303	(s)	2	5	(s)	16	22	325	382	707	539	1,245
November .....	1	365	79	445	(s)	2	4	(s)	15	21	466	365	831	541	1,372
December .....	2	510	96	607	(s)	2	4	(s)	15	21	628	389	1,017	601	1,618
Total .....	14	3,633	903	4,550	1	20	63	1	185	269	4,819	4,746	9,565	6,961	16,525
2023 January .....	1	492	102	595	(s)	2	4	(s)	15	21	616	377	993	549	1,542
February .....	1	438	103	543	(s)	2	4	(s)	14	20	562	346	908	467	1,376
March .....	1	423	92	516	NM	2	6	(s)	15	23	538	375	914	513	1,427
April .....	1	262	71	334	NM	2	6	(s)	14	23	357	346	703	458	1,161
May .....	1	189	66	256	NM	2	7	(s)	15	24	280	377	656	537	1,193
June .....	1	154	59	214	NM	2	7	(s)	15	24	238	402	640	599	1,239
July .....	1	148	53	202	NM	2	7	(s)	15	25	227	452	679	708	1,387
August .....	1	150	52	203	NM	2	7	(s)	16	24	228	458	686	695	1,381
September .....	1	152	58	210	NM	2	6	(s)	15	23	233	421	654	588	1,242
October .....	1	232	70	304	NM	2	5	(s)	15	22	326	393	719	563	1,282
November .....	1	359	78	439	(s)	2	4	(s)	15	21	460	362	822	541	1,363
11-Month Total ...	11	3,000	805	3,816	1	18	65	(s)	164	249	4,065	4,309	8,374	6,219	14,593
2022 11-Month Total ...	13	3,124	806	3,943	1	18	59	1	170	248	4,191	4,357	8,548	6,351	14,900
2021 11-Month Total ...	14	2,994	802	3,810	1	20	50	1	136	207	4,017	4,169	8,186	6,288	14,475

<sup>a</sup> Sum of "Total Primary" and "Electricity." See "End-Use Energy Consumption" in Glossary.

<sup>b</sup> Energy consumed in the form that it is first accounted for, before any transformation to secondary or tertiary forms of energy. See "Primary Energy Consumption" in Glossary.

<sup>c</sup> See Table 10.2a for notes on series components.

<sup>d</sup> Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

<sup>e</sup> Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

<sup>f</sup> Conventional hydroelectric power.

<sup>g</sup> Includes small-scale solar photovoltaic (PV) electricity and solar thermal energy in the commercial sector. See Tables 10.2a and 10.5.

<sup>h</sup> Electricity sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

<sup>i</sup> Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity sales to ultimate customers. Total losses are allocated to the end-use sectors in proportion to each sector's

share of total electricity sales to ultimate customers. See Note 1, "Electrical System Energy Losses," at end of section.

R=Revised. NA=Not available. NM=Not meaningful. —=No data reported. (s)=Less than 0.5 trillion Btu.

Notes: • Data are estimates, except for coal totals beginning in 2008; hydroelectric power; solar; wind; and electricity sales to ultimate customers beginning in 1979. • The commercial sector includes commercial combined-heat-and-power (CHP) and commercial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7.

• See Note 2, "Other Energy Losses," at end of section. • See Note 3, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

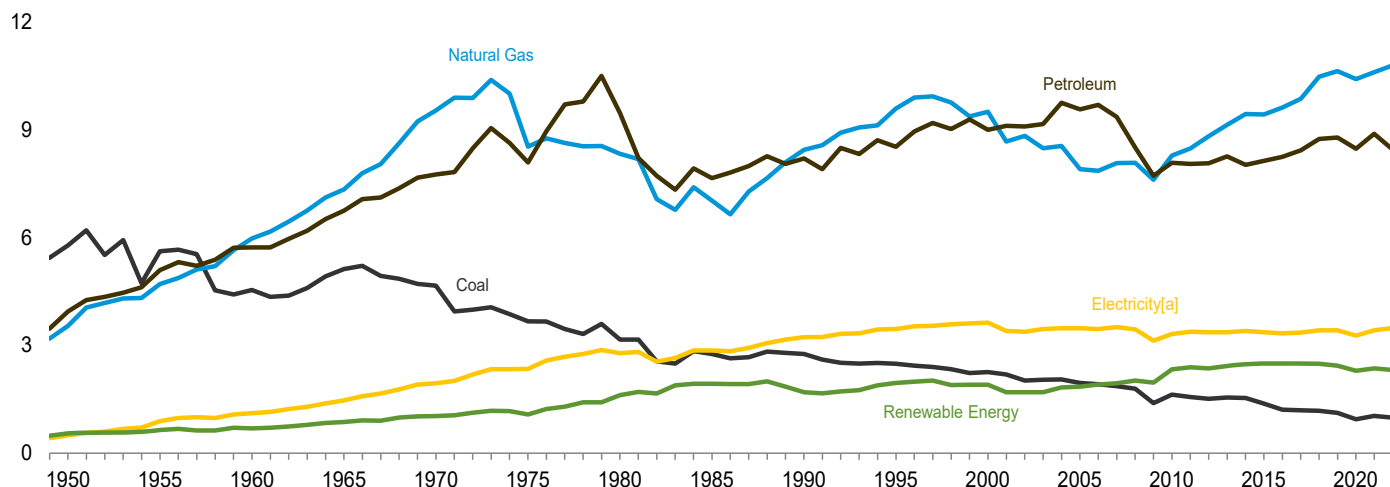
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

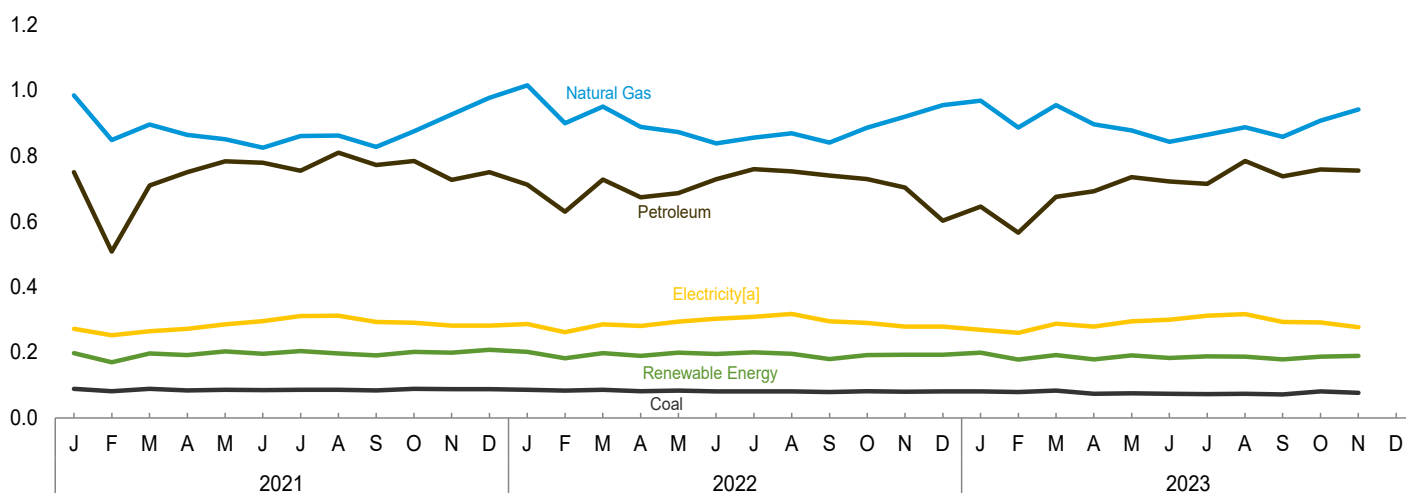
**Figure 2.4 Industrial Sector Energy Consumption**

(Quadrillion Btu)

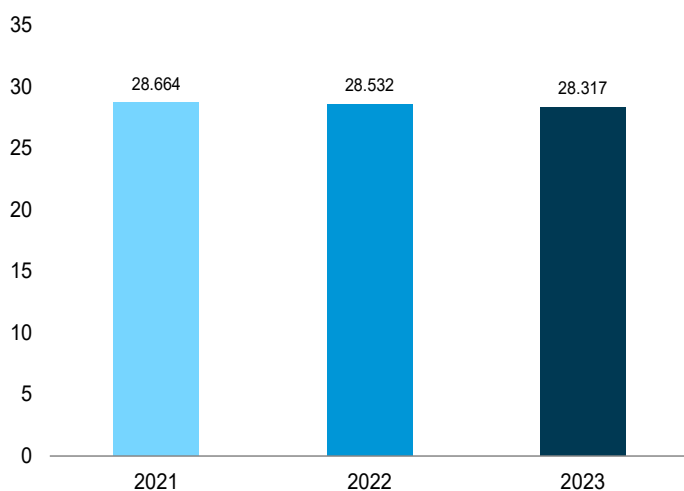
By Major Source, 1949–2022



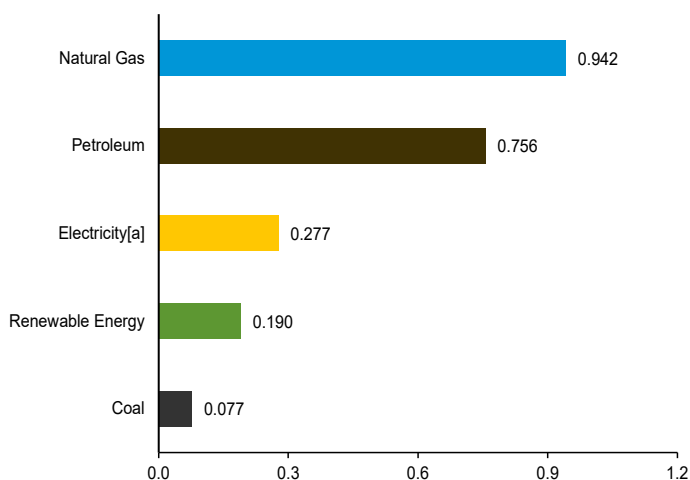
By Major Source, Monthly



Total, January–November



By Major Source, November 2023



[a] Electricity sales to ultimate customers.

Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.

Source: Table 2.4.

**Table 2.4 Industrial Sector Energy Consumption**  
(Trillion Btu)

	End-Use Energy Consumption <sup>a</sup>													Electrical System Energy Losses <sup>k</sup>	Total
	Primary Consumption <sup>b</sup>										Elec- tricity <sup>j</sup>	Total End Use			
	Fossil Fuels <sup>c</sup>				Renewable Energy <sup>d</sup>										
	Coal	Natural Gas <sup>e</sup>	Petro- leum <sup>f</sup>	Total <sup>g</sup>	Hydro- electric Power <sup>h</sup>	Geo- thermal	Solar <sup>i</sup>	Wind	Bio- mass	Total					
1950 Total .....	5,781	3,546	3,943	13,271	17	NA	NA	NA	532	549	13,820	500	14,319	1,340	15,659
1955 Total .....	5,620	4,701	5,093	15,404	11	NA	NA	NA	631	642	16,046	887	16,933	2,005	18,938
1960 Total .....	4,543	5,973	5,720	16,231	12	NA	NA	NA	680	692	16,923	1,107	18,030	2,234	20,264
1965 Total .....	5,127	7,339	6,750	19,197	11	NA	NA	NA	855	866	20,063	1,463	21,526	2,873	24,399
1970 Total .....	4,656	9,536	7,754	21,888	11	NA	NA	NA	1,019	1,030	22,918	1,948	24,866	3,995	28,862
1975 Total .....	3,667	8,532	8,092	20,304	11	NA	NA	NA	1,063	1,074	21,378	2,346	23,725	4,797	28,522
1980 Total .....	3,155	8,333	9,464	20,916	11	NA	NA	NA	1,600	1,611	22,527	2,781	25,308	5,900	31,209
1985 Total .....	2,760	7,032	7,656	17,434	11	NA	NA	NA	1,918	1,928	19,363	2,855	22,218	5,782	28,000
1990 Total .....	2,756	8,443	8,200	19,403	10	2	(s)	—	1,684	1,696	21,100	3,226	24,326	6,652	30,978
1995 Total .....	2,488	9,592	8,525	20,666	18	3	(s)	—	1,934	1,955	22,622	3,455	26,077	7,048	33,125
2000 Total .....	2,256	9,500	8,999	20,821	14	4	(s)	—	1,881	1,900	22,721	3,631	26,352	7,592	33,945
2005 Total .....	1,954	7,907	9,567	19,472	11	4	(s)	—	1,834	1,849	21,322	3,477	24,799	7,003	31,803
2006 Total .....	1,914	7,861	9,693	19,529	10	4	(s)	—	1,892	1,906	21,436	3,451	24,886	6,823	31,710
2007 Total .....	1,865	8,074	9,363	19,326	5	5	(s)	—	1,937	1,947	21,273	3,507	24,780	6,993	31,773
2008 Total .....	1,793	8,083	8,502	18,420	6	5	(s)	—	2,012	2,023	20,443	3,444	23,888	6,797	30,685
2009 Total .....	1,392	7,609	7,720	16,698	6	4	1	—	1,948	1,959	18,657	3,130	21,787	5,995	27,782
2010 Total .....	1,631	8,278	8,083	17,986	6	4	1	—	2,320	2,331	20,317	3,314	23,631	6,328	29,958
2011 Total .....	1,561	8,481	8,055	18,107	6	4	1	(s)	2,375	2,387	20,494	3,382	23,876	6,247	30,123
2012 Total .....	1,513	8,819	8,066	18,401	8	4	2	(s)	2,349	2,363	20,765	3,363	24,128	6,103	30,230
2013 Total .....	1,546	9,140	8,260	18,930	12	4	3	(s)	2,407	2,427	21,357	3,362	24,719	6,043	30,762
2014 Total .....	1,530	9,441	8,021	18,971	4	4	4	(s)	2,466	2,478	21,449	3,404	24,853	6,068	30,921
2015 Total .....	1,380	9,426	8,135	18,923	5	4	5	(s)	2,474	2,489	21,411	3,366	24,777	5,836	30,613
2016 Total .....	1,205	9,617	8,243	19,046	4	4	7	(s)	2,487	2,503	21,549	3,333	24,882	5,639	30,520
2017 Total .....	1,195	9,864	8,427	19,458	5	4	8	(s)	2,475	2,493	21,951	3,358	25,309	5,534	30,843
2018 Total .....	1,180	10,474	8,747	20,375	4	4	9	(s)	2,471	2,489	22,864	3,414	26,278	5,535	31,813
2019 Total .....	1,117	10,630	8,785	20,511	4	4	11	(s)	2,416	2,435	22,946	3,420	26,366	5,349	31,716
2020 Total .....	938	10,410	8,476	19,811	3	4	12	2	2,270	2,292	22,103	3,272	25,376	4,913	30,288
2021 January .....	89	985	751	1,822	(s)	(s)	1	(s)	197	198	2,020	272	2,292	416	2,709
February .....	82	849	508	1,437	(s)	(s)	1	(s)	168	170	1,607	253	1,860	398	2,258
March .....	89	896	710	1,696	(s)	(s)	1	(s)	195	197	1,893	265	2,158	363	2,521
April .....	84	864	751	1,696	(s)	(s)	1	(s)	191	192	1,888	272	2,160	381	2,541
May .....	86	851	784	1,717	(s)	(s)	1	(s)	201	203	1,920	286	2,206	429	2,636
June .....	85	825	779	1,683	(s)	(s)	1	(s)	194	196	1,878	296	2,174	473	2,647
July .....	86	861	755	1,698	(s)	(s)	1	(s)	202	204	1,902	311	2,213	500	2,712
August .....	86	863	810	1,753	(s)	(s)	1	(s)	195	197	1,951	312	2,263	497	2,760
September .....	84	828	773	1,679	(s)	(s)	1	(s)	189	191	1,870	293	2,162	420	2,582
October .....	89	876	785	1,746	(s)	(s)	1	(s)	200	202	1,948	291	2,240	419	2,659
November .....	88	927	727	1,738	(s)	(s)	1	(s)	197	199	1,936	282	2,218	422	2,640
December .....	88	978	751	1,810	(s)	(s)	1	(s)	207	208	2,018	282	2,300	418	2,718
Total .....	1,036	10,603	8,885	20,476	3	4	14	(s)	2,336	2,357	22,833	3,414	26,247	5,147	31,394
2022 January .....	86	1,016	713	1,810	(s)	(s)	1	(s)	201	202	2,012	287	2,299	446	2,745
February .....	83	900	630	1,611	(s)	(s)	1	(s)	180	182	1,793	262	2,055	371	2,426
March .....	86	951	728	1,760	(s)	(s)	1	(s)	196	198	1,958	286	2,243	385	2,628
April .....	82	889	674	1,641	(s)	(s)	1	(s)	188	190	1,830	281	2,112	370	2,482
May .....	83	873	687	1,634	(s)	(s)	2	(s)	196	199	1,833	294	2,126	431	2,558
June .....	81	838	729	1,645	(s)	(s)	2	(s)	193	195	1,840	303	2,142	458	2,600
July .....	81	856	760	1,693	(s)	(s)	2	(s)	197	200	1,892	309	2,201	484	2,684
August .....	81	869	753	1,698	(s)	(s)	2	(s)	194	196	1,894	318	2,212	479	2,691
September .....	79	841	740	1,655	(s)	(s)	1	(s)	178	180	1,835	295	2,131	414	2,544
October .....	82	886	730	1,694	(s)	(s)	1	(s)	190	192	1,886	290	2,176	409	2,586
November .....	80	920	704	1,701	(s)	(s)	1	(s)	192	193	1,894	279	2,173	414	2,587
December .....	81	955	602	1,633	(s)	(s)	1	(s)	191	193	1,825	279	2,105	432	2,537
Total .....	987	10,793	8,451	20,175	3	4	15	(s)	2,296	2,319	22,494	3,482	25,976	5,107	31,083
2023 January .....	81	969	645	1,692	(s)	(s)	1	(s)	197	199	1,891	269	2,160	393	2,553
February .....	79	887	566	1,530	(s)	(s)	1	(s)	176	178	1,708	260	1,967	351	2,318
March .....	83	955	675	1,710	(s)	(s)	1	(s)	190	192	1,902	288	2,190	394	2,584
April .....	74	897	692	1,662	(s)	(s)	2	(s)	177	179	1,841	279	2,120	369	2,488
May .....	75	878	735	1,685	(s)	(s)	2	(s)	189	191	1,876	295	2,171	420	2,591
June .....	74	843	722	1,637	(s)	(s)	2	(s)	181	183	1,820	300	2,120	448	2,568
July .....	73	865	715	1,650	(s)	(s)	2	(s)	186	188	1,838	312	2,151	489	2,639
August .....	74	888	785	1,744	(s)	(s)	2	(s)	185	187	1,932	317	2,249	481	2,730
September .....	72	859	738	1,666	(s)	(s)	1	(s)	177	179	1,845	293	2,137	409	2,547
October .....	81	908	759	1,746	(s)	(s)	1	(s)	185	187	1,933	292	2,225	418	2,643
November .....	77	942	756	1,774	(s)	(s)	1	(s)	188	190	1,964	277	2,241	415	2,656
11-Month Total ...	843	9,893	7,787	18,496	3	4	15	(s)	2,030	2,052	20,548	3,183	23,731	4,586	28,317
2022 11-Month Total ...	906	9,838	7,849	18,542	3	4	14	(s)	2,105	2,126	20,668	3,203	23,871	4,661	28,532
2021 11-Month Total ...	948	9,625	8,134	18,665	3	4	13	(s)	2,129	2,149	20,814	3,132	23,946	4,718	28,664

<sup>a</sup> Sum of "Total Primary" and "Electricity." See "End-Use Energy Consumption" in Glossary.

<sup>b</sup> Energy consumed in the form that it is first accounted for, before any transformation to secondary or tertiary forms of energy. See "Primary Energy Consumption" in Glossary.

<sup>c</sup> Includes non-combustion use of fossil fuels.

<sup>d</sup> See Table 10.2b for notes on series components and estimation.

<sup>e</sup> Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

<sup>f</sup> Does not include biofuels that have been blended with petroleum—biofuels are included in "Biomass."

<sup>g</sup> Includes coal coke net imports, which are not separately displayed. See Tables 1.4a and 1.4b.

<sup>h</sup> Conventional hydroelectric power.

<sup>i</sup> Includes both utility-scale and small-scale solar photovoltaic (PV) electricity net generation in the industrial sector. See Tables 10.2b and 10.5.

<sup>j</sup> Electricity sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

<sup>k</sup> Total losses are calculated as the primary energy consumed by the electric

power sector minus the energy content of electricity sales to ultimate customers. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales to ultimate customers. See Note 1, "Electrical System Energy Losses," at end of section.

R=Revised. NA=Not available. —=No data reported. (s)=Less than 0.5 trillion Btu.

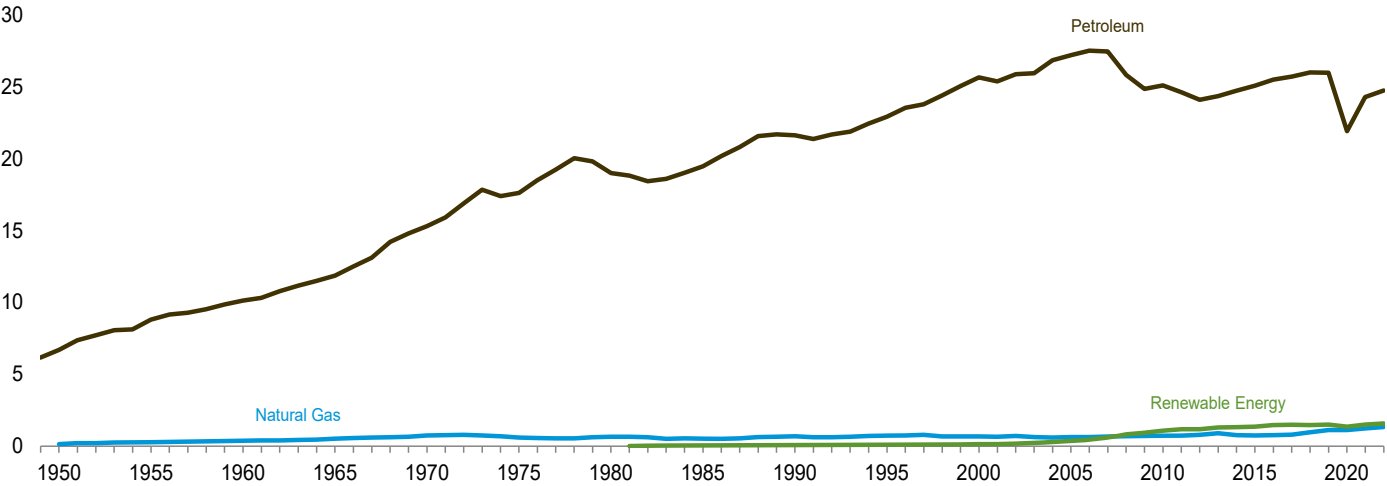
Notes: • Data are estimates, except for coal totals; hydroelectric power in 1949–1978 and 1989 forward; solar; wind; and electricity sales to ultimate customers. • The industrial sector includes industrial combined-heat-and-power (CHP) and industrial electricity-only plants. See Note 2, "Classification of Power Plants Into Energy-Use Sectors," at end of Section 7. • See Note 2, "Other Energy Losses," at end of section. • See Note 3, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

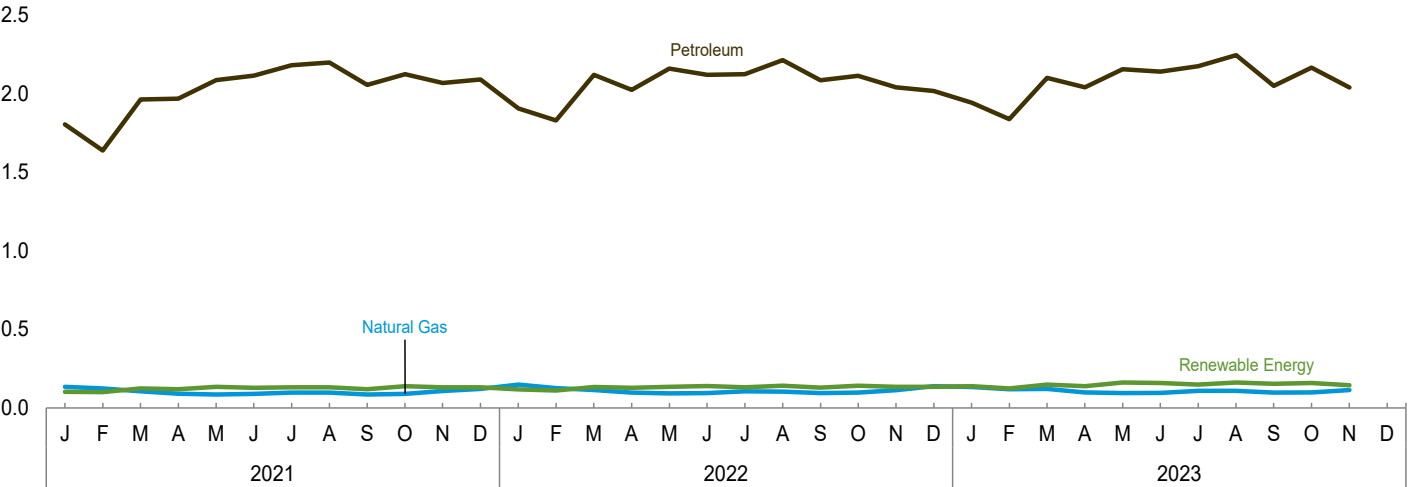
Sources: See end of section.

Figure 2.5 Transportation Sector Energy Consumption  
(Quadrillion Btu)

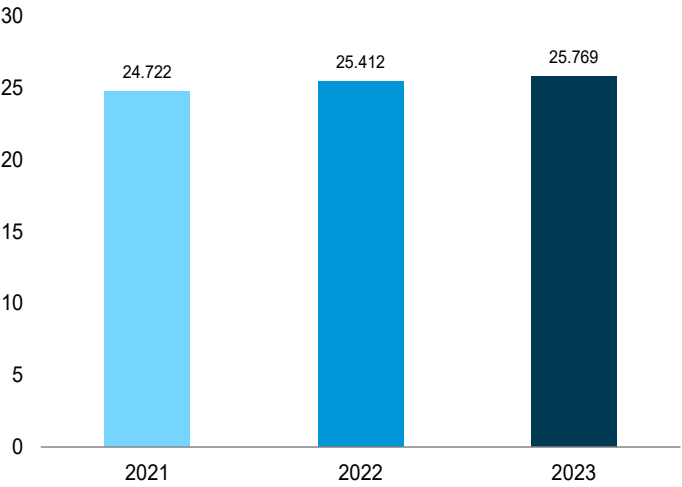
By Major Source, 1949–2022



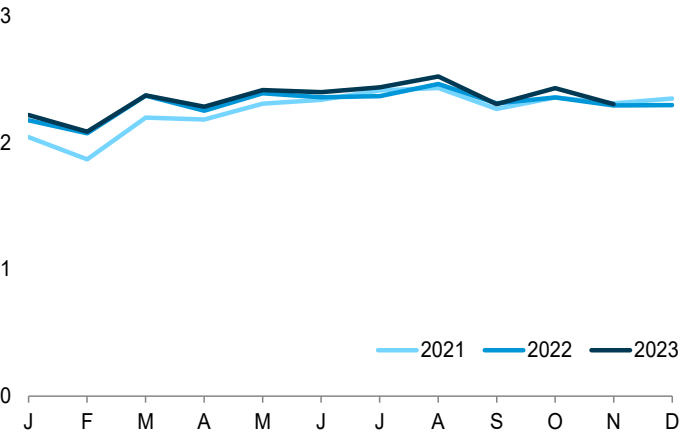
By Major Source, Monthly



Total, January–November



Total, Monthly



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.  
Source: Table 2.5.

**Table 2.5 Transportation Sector Energy Consumption**  
(Trillion Btu)

	End-Use Energy Consumption <sup>a</sup>								Electrical System Energy Losses <sup>g</sup>	Total
	Primary Consumption <sup>b</sup>					Electricity <sup>f</sup>	Total End Use			
	Fossil Fuels				Renewable Energy <sup>c</sup>			Total Primary		
	Coal	Natural Gas <sup>d</sup>	Petroleum <sup>e</sup>	Total	Biomass					
1950 Total .....	1,564	130	6,690	8,383	NA	8,383	23	8,407	62	8,469
1955 Total .....	421	254	8,799	9,474	NA	9,474	20	9,494	45	9,539
1960 Total .....	75	359	10,125	10,560	NA	10,560	10	10,570	21	10,591
1965 Total .....	16	517	11,866	12,399	NA	12,399	10	12,409	20	12,428
1970 Total .....	7	745	15,311	16,062	NA	16,062	11	16,073	22	16,094
1975 Total .....	1	595	17,615	18,211	NA	18,211	10	18,221	21	18,241
1980 Total .....	(h)	650	19,009	19,659	NA	19,659	11	19,670	23	19,694
1985 Total .....	(h)	519	19,472	19,992	50	20,042	14	20,056	29	20,084
1990 Total .....	(h)	679	21,626	22,305	60	22,366	16	22,382	33	22,415
1995 Total .....	(h)	724	22,920	23,644	112	23,757	17	23,774	35	23,808
2000 Total .....	(h)	672	25,649	26,321	135	26,456	18	26,474	38	26,512
2005 Total .....	(h)	624	27,217	27,840	339	28,179	26	28,205	52	28,257
2006 Total .....	(h)	625	27,518	28,143	475	28,618	25	28,643	50	28,693
2007 Total .....	(h)	663	27,462	28,126	602	28,727	28	28,755	56	28,811
2008 Total .....	(h)	692	25,823	26,515	825	27,339	26	27,366	52	27,417
2009 Total .....	(h)	715	24,860	25,575	935	26,510	27	26,536	51	26,587
2010 Total .....	(h)	719	25,100	25,819	1,075	26,894	26	26,920	50	26,970
2011 Total .....	(h)	734	24,623	25,357	1,166	26,523	26	26,549	48	26,598
2012 Total .....	(h)	780	24,108	24,888	1,169	26,057	25	26,082	45	26,127
2013 Total .....	(h)	887	24,361	25,248	1,292	26,541	26	26,567	47	26,614
2014 Total .....	(h)	760	24,728	25,487	1,314	26,802	26	26,828	47	26,875
2015 Total .....	(h)	745	25,086	25,831	1,351	27,182	26	27,208	45	27,253
2016 Total .....	(h)	757	25,515	26,272	1,469	27,741	26	27,767	43	27,810
2017 Total .....	(h)	799	25,707	26,506	1,474	27,979	26	28,005	42	28,047
2018 Total .....	(h)	962	26,017	26,979	1,456	28,435	26	28,461	42	28,504
2019 Total .....	(h)	1,114	25,992	27,106	1,497	28,602	26	28,628	41	28,669
2020 Total .....	(h)	1,109	21,930	23,039	1,355	24,394	22	24,417	34	24,450
2021 January .....	(h)	135	1,804	1,938	102	2,040	2	2,042	3	2,045
February .....	(h)	125	1,638	1,764	101	1,865	2	1,867	3	1,869
March .....	(h)	106	1,962	2,068	125	2,194	2	2,196	3	2,198
April .....	(h)	91	1,968	2,059	120	2,179	2	2,181	2	2,183
May .....	(h)	85	2,086	2,171	134	2,305	2	2,307	2	2,309
June .....	(h)	90	2,114	2,204	128	2,332	2	2,334	3	2,337
July .....	(h)	97	2,181	2,278	131	2,408	2	2,410	3	2,413
August .....	(h)	98	2,197	2,295	132	2,427	2	2,428	3	2,432
September .....	(h)	86	2,056	2,142	120	2,262	2	2,264	3	2,267
October .....	(h)	90	2,124	2,214	139	2,353	2	2,355	3	2,357
November .....	(h)	108	2,067	2,175	132	2,307	2	2,308	3	2,311
December .....	(h)	121	2,090	2,211	132	2,343	2	2,345	3	2,348
Total .....	(h)	1,232	24,287	25,519	1,496	27,015	22	27,037	33	27,070
2022 January .....	(h)	148	1,906	2,054	118	2,172	2	2,174	3	2,177
February .....	(h)	126	1,830	1,956	112	2,068	2	2,070	3	2,073
March .....	(h)	114	2,120	2,235	133	2,368	2	2,370	3	2,372
April .....	(h)	97	2,023	2,120	128	2,248	2	2,250	2	2,252
May .....	(h)	92	2,159	2,251	135	2,385	2	2,387	3	2,390
June .....	(h)	95	2,120	2,215	140	2,355	2	2,357	3	2,359
July .....	(h)	106	2,123	2,229	132	2,361	2	2,363	3	2,366
August .....	(h)	105	2,212	2,317	141	2,459	2	2,461	3	2,463
September .....	(h)	94	2,084	2,177	129	2,306	2	2,308	3	2,310
October .....	(h)	97	2,113	2,210	142	2,352	2	2,354	3	2,356
November .....	(h)	113	2,040	2,153	135	2,288	2	2,290	3	2,293
December .....	(h)	139	2,016	2,155	135	2,290	2	2,292	3	2,295
Total .....	(h)	1,326	24,747	26,073	1,579	27,652	23	27,674	33	27,707
2023 January .....	(h)	133	1,942	2,075	138	2,213	2	2,215	3	2,218
February .....	(h)	119	1,837	1,956	125	2,080	2	2,082	3	2,085
March .....	(h)	122	2,099	2,221	149	2,370	2	2,371	3	2,374
April .....	(h)	99	2,040	2,139	139	2,278	2	2,280	2	2,282
May .....	(h)	95	2,155	2,250	162	2,412	2	2,413	3	2,416
June .....	(h)	96	2,140	2,236	159	2,395	2	2,397	3	2,399
July .....	(h)	109	2,174	2,283	149	2,431	2	2,433	3	2,437
August .....	(h)	109	2,245	2,354	162	2,516	2	2,518	3	2,521
September .....	(h)	97	2,049	2,146	153	2,299	2	2,301	3	2,304
October .....	(h)	100	2,166	2,266	158	2,424	2	2,426	3	2,429
November .....	(h)	115	2,039	2,154	145	2,299	2	2,301	3	2,304
11-Month Total ...	(h)	1,193	22,886	24,079	1,637	25,717	22	25,738	31	25,769
2022 11-Month Total ...	(h)	1,187	22,731	23,918	1,444	25,362	20	25,382	30	25,412
2021 11-Month Total ...	(h)	1,111	22,197	23,309	1,364	24,672	20	24,692	30	24,722

<sup>a</sup> Sum of "Total Primary" and "Electricity." See "End-Use Energy Consumption" in Glossary.

<sup>b</sup> Energy consumed in the form that it is first accounted for, before any transformation to secondary or tertiary forms of energy. See "Primary Energy Consumption" in Glossary.

<sup>c</sup> See Table 10.2c for notes on series components.

<sup>d</sup> Natural gas consumed in the operation of pipelines and smaller amounts consumed as vehicle fuel. Does not include supplemental gaseous fuels—see Note 3, "Supplemental Gaseous Fuels," at end of Section 4.

<sup>e</sup> Does not include biofuels. Biofuels are included in "Biomass." Includes non-combustion use of lubricants.

<sup>f</sup> Electricity sales to ultimate customers reported by electric utilities and, beginning in 1996, other energy service providers.

<sup>g</sup> Total losses are calculated as the primary energy consumed by the electric power sector minus the energy content of electricity sales to ultimate customers. Total losses are allocated to the end-use sectors in proportion to each sector's

share of total electricity sales to ultimate customers. See Note 1, "Electrical System Energy Losses," at end of section.

<sup>h</sup> Beginning in 1978, the small amounts of coal consumed for transportation are reported as industrial sector consumption.

NA=Not available.

Notes: • Data are estimates, except for coal totals through 1977; and electricity sales to ultimate customers beginning in 1979. • See Note 2, "Other Energy Losses," at end of section. • See Note 3, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.

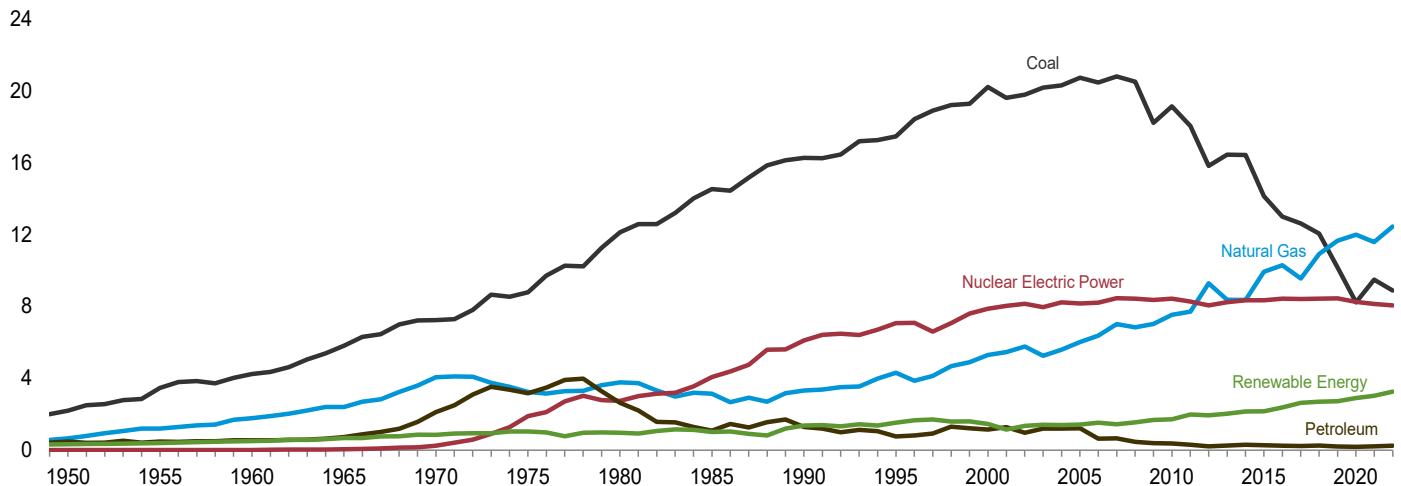
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.

Sources: See end of section.

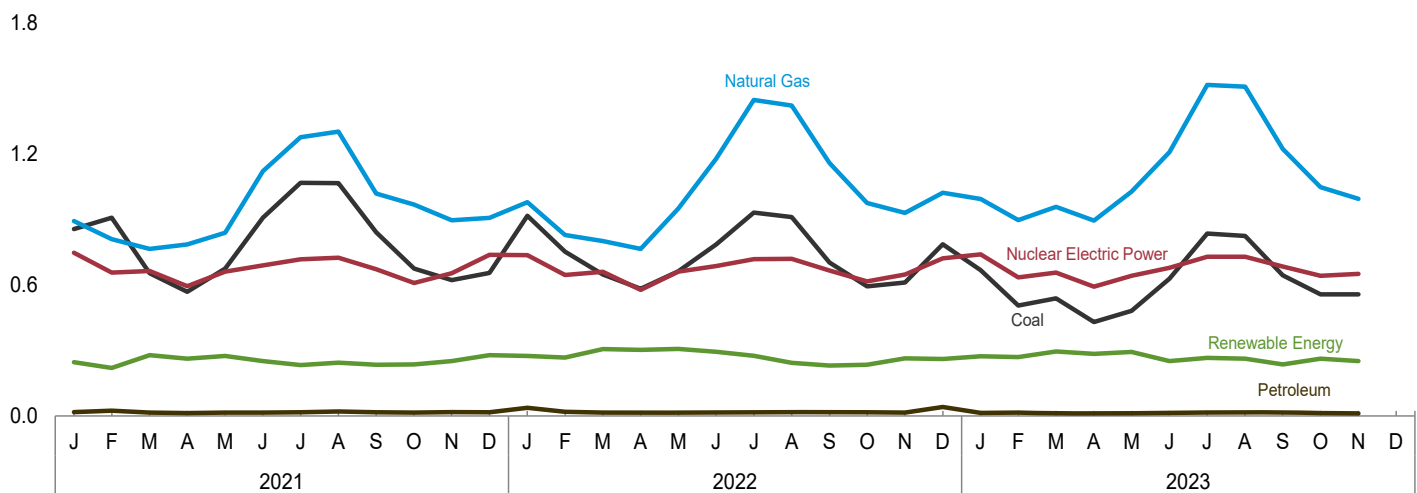
**Figure 2.6 Electric Power Sector Energy Consumption**

(Quadrillion Btu)

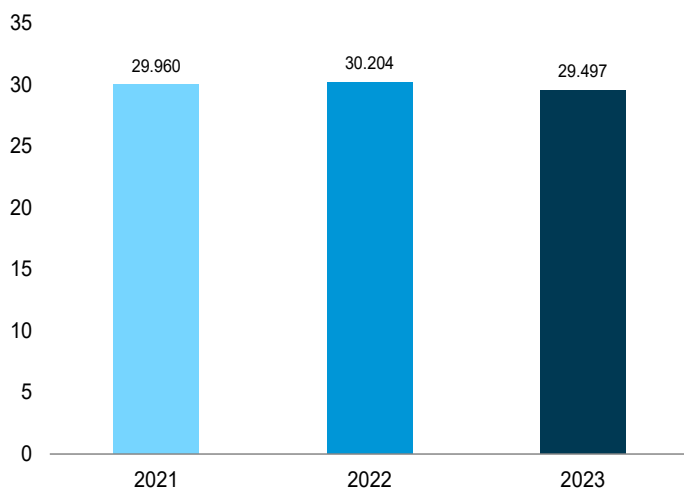
By Major Source, 1949–2022



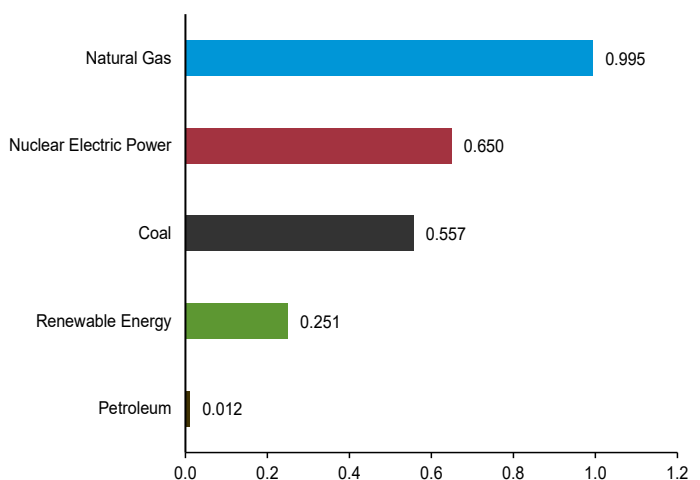
By Major Source, Monthly



Total, January–November



By Major Source, November 2023



Web Page: <http://www.eia.gov/totalenergy/data/monthly/#consumption>.

Source: Table 2.6.

**Table 2.6 Electric Power Sector Energy Consumption**  
(Trillion Btu)

	Primary Consumption <sup>a</sup>												Elec- tricity Net Imports <sup>f</sup>	Total Primary
	Fossil Fuels				Nuclear Electric Power	Renewable Energy <sup>b</sup>								
	Coal	Natural Gas <sup>c</sup>	Petro- leum	Total		Hydro- electric Power <sup>d</sup>	Geo- thermal	Solar <sup>e</sup>	Wind	Bio- mass	Total			
1950 Total .....	2,199	651	472	3,322	0	327	NA	NA	NA	5	333	6	3,661	
1955 Total .....	3,458	1,194	471	5,123	0	385	NA	NA	NA	3	389	14	5,525	
1960 Total .....	4,228	1,785	553	6,565	6	498	(s)	NA	NA	2	499	15	7,086	
1965 Total .....	5,821	2,395	722	8,938	43	661	1	NA	NA	3	665	(s)	9,646	
1970 Total .....	7,227	4,054	2,117	13,399	239	845	2	NA	NA	4	851	7	14,495	
1975 Total .....	8,786	3,240	3,166	15,191	1,900	1,024	11	NA	NA	2	1,037	21	18,149	
1980 Total .....	12,123	3,778	2,634	18,534	2,739	942	17	NA	NA	4	964	71	22,309	
1985 Total .....	14,542	3,135	1,090	18,767	4,076	959	32	(s)	(s)	14	1,006	140	23,988	
1990 Total .....	16,261	3,309	1,289	20,859	6,104	989	53	1	10	317	1,369	8	28,340	
1995 Total .....	17,466	4,302	755	22,523	7,075	1,042	46	2	11	422	1,522	134	31,254	
2000 Total .....	20,220	5,293	1,144	26,658	7,862	926	48	2	19	453	1,447	115	36,083	
2005 Total .....	20,737	6,015	1,222	27,974	8,161	911	50	2	61	406	1,430	85	37,649	
2006 Total .....	20,462	6,375	637	27,474	8,215	977	50	2	91	412	1,531	63	37,283	
2007 Total .....	20,808	7,005	648	28,461	8,459	839	50	2	118	423	1,432	107	38,458	
2008 Total .....	20,513	6,829	459	27,801	8,426	864	51	3	189	435	1,541	112	37,881	
2009 Total .....	18,225	7,022	382	25,630	8,355	926	51	3	252	441	1,674	116	35,775	
2010 Total .....	19,133	7,528	370	27,031	8,434	882	52	4	323	459	1,720	89	37,275	
2011 Total .....	18,035	7,712	295	26,042	8,269	1,083	52	6	410	437	1,988	127	36,426	
2012 Total .....	15,821	9,287	214	25,322	8,062	934	53	14	480	453	1,935	161	35,480	
2013 Total .....	16,451	8,376	255	25,082	8,244	904	54	30	572	470	2,030	197	35,554	
2014 Total .....	16,427	8,362	295	25,085	8,338	880	54	59	619	530	2,143	182	35,747	
2015 Total .....	14,138	9,926	276	24,341	8,337	845	54	83	650	525	2,158	227	35,063	
2016 Total .....	12,996	10,301	244	23,542	8,427	909	54	121	774	505	2,363	227	34,558	
2017 Total .....	12,622	9,555	218	22,395	8,419	1,019	54	180	867	510	2,630	192	33,636	
2018 Total .....	12,053	10,922	260	23,235	8,438	993	54	216	929	496	2,689	152	34,514	
2019 Total .....	10,181	11,658	189	22,028	8,452	978	51	243	1,009	448	2,729	133	33,343	
2020 Total .....	8,229	12,000	184	20,413	8,251	969	53	302	1,150	428	2,902	161	31,728	
2021 January .....	856	892	18	1,765	748	83	4	19	102	38	247	14	2,775	
February .....	908	810	24	1,742	657	68	4	21	91	35	220	10	2,629	
March .....	654	765	15	1,435	664	72	4	32	134	37	278	13	2,390	
April .....	569	785	13	1,367	595	66	4	37	123	32	263	11	2,237	
May .....	675	839	15	1,529	661	79	4	42	115	34	275	13	2,478	
June .....	909	1,121	15	2,045	689	80	4	41	91	36	252	15	3,001	
July .....	1,068	1,277	17	2,362	718	75	4	41	74	38	233	15	3,328	
August .....	1,066	1,302	21	2,388	725	69	4	41	92	38	244	12	3,368	
September .....	841	1,019	17	1,877	673	58	4	38	99	35	234	9	2,793	
October .....	675	968	16	1,659	609	58	4	31	110	33	236	10	2,514	
November .....	622	896	18	1,536	654	66	5	26	122	34	252	4	2,447	
December .....	655	907	17	1,579	738	80	5	21	136	37	278	8	2,603	
Total .....	9,498	11,583	205	21,285	8,131	854	53	391	1,289	426	3,014	134	32,564	
2022 January .....	917	979	37	1,933	737	82	5	27	128	34	275	10	2,955	
February .....	753	829	19	1,600	646	72	4	31	128	32	267	6	2,520	
March .....	648	801	16	1,464	660	83	4	40	147	32	306	7	2,437	
April .....	583	765	14	1,362	578	68	4	45	157	28	303	9	2,252	
May .....	663	950	16	1,629	662	79	5	51	144	29	308	9	2,609	
June .....	786	1,179	17	1,982	687	88	4	54	115	31	294	15	2,977	
July .....	931	1,447	17	2,396	719	84	5	53	101	34	276	19	3,409	
August .....	911	1,422	17	2,350	720	72	5	49	84	33	243	20	3,333	
September .....	703	1,159	17	1,879	666	58	5	45	93	30	231	13	2,789	
October .....	593	975	17	1,585	616	49	4	40	112	29	234	10	2,445	
November .....	611	930	16	1,556	648	61	5	28	140	30	264	9	2,478	
December .....	787	1,023	41	1,851	722	69	5	23	132	32	261	14	2,848	
Total .....	8,885	12,459	244	21,589	8,061	865	55	487	1,481	374	3,263	141	33,053	
2023 January .....	668	993	14	1,676	740	76	5	27	134	31	273	11	2,700	
February .....	506	897	16	1,419	635	63	4	31	143	27	270	7	2,331	
March .....	539	958	13	1,510	656	69	5	41	152	29	295	9	2,470	
April .....	430	895	12	1,337	592	59	5	50	147	24	285	7	2,220	
May .....	481	1,027	12	1,521	642	93	5	57	109	28	293	9	2,464	
June .....	629	1,209	13	1,851	679	66	4	60	94	28	252	6	2,788	
July .....	835	1,516	17	2,367	730	72	4	64	95	30	266	4	3,368	
August .....	825	1,508	17	2,350	729	72	5	60	97	29	263	5	3,347	
September .....	644	1,224	16	1,884	685	56	5	53	96	27	236	(s)	2,806	
October .....	557	1,048	13	1,618	642	61	5	48	124	23	262	8	2,530	
November .....	557	995	12	1,564	650	61	5	35	126	24	251	9	2,474	
11-Month Total .....	6,673	12,271	154	19,098	7,381	749	51	526	1,316	301	2,944	74	29,497	
2022 11-Month Total .....	8,098	11,435	203	19,736	7,339	796	50	464	1,349	342	3,001	127	30,204	
2021 11-Month Total .....	8,842	10,675	188	19,705	7,393	774	48	370	1,154	389	2,735	126	29,960	

<sup>a</sup> See "Primary Energy Consumption" in Glossary.  
<sup>b</sup> See Table 10.2c for notes on series components.  
<sup>c</sup> Natural gas only; excludes the estimated portion of supplemental gaseous fuels. See Note 3, "Supplemental Gaseous Fuels," at end of Section 4.  
<sup>d</sup> Conventional hydroelectric power.  
<sup>e</sup> Solar photovoltaic (PV) and solar thermal electricity net generation in the electric power sector. See Tables 10.2c and 10.5.  
<sup>f</sup> Net imports equal imports minus exports.  
<sup>g</sup> Through 1988, data are for electric utilities only. Beginning in 1989, data are for electric utilities and independent power producers.  
NA=Not available. (s)=Less than 0.5 trillion Btu.

Notes: • Data are for fuels consumed to produce electricity and useful thermal output. • The electric power sector comprises electricity-only and combined-heat-and-power (CHP) plants within the NAICS 22 category whose primary business is to sell electricity, or electricity and heat, to the public. • See Note 3, "Energy Consumption Data and Surveys," at end of section. • Totals may not equal sum of components due to independent rounding. • Geographic coverage is the 50 states and the District of Columbia.  
Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all available annual data beginning in 1949 and monthly data beginning in 1973.  
Sources: See end of section.

**Table 2.7 U.S. Government Energy Consumption by Agency, Fiscal Years**  
(Trillion Btu)

Fiscal Year <sup>a</sup>	Agri-culture	Defense	DHS <sup>b</sup>	Energy	GSA <sup>c</sup>	HHS <sup>d</sup>	Interior	Justice	NASA <sup>e</sup>	Postal Service	Transportation	Veterans Affairs	Other <sup>f</sup>	Total
1975 .....	9.5	1,360.2	--	50.4	22.3	6.5	9.4	5.9	13.4	30.5	19.3	27.1	10.5	1,565.0
1976 .....	9.3	1,183.3	--	50.3	20.6	6.7	9.4	5.7	12.4	30.0	19.5	25.0	11.2	1,383.4
1977 .....	8.9	1,192.3	--	51.6	20.4	6.9	9.5	5.9	12.0	32.7	20.4	25.9	11.9	1,398.5
1978 .....	9.1	1,157.8	--	50.1	20.4	6.5	9.2	5.9	11.2	30.9	20.6	26.8	12.4	1,360.9
1979 .....	9.2	1,175.8	--	49.6	19.6	6.4	10.4	6.4	11.1	29.3	19.6	25.7	12.3	1,375.4
1980 .....	8.6	1,183.1	--	47.4	18.1	6.0	8.5	5.7	10.4	27.2	19.2	24.8	12.3	1,371.2
1981 .....	7.9	1,239.5	--	47.3	18.0	6.7	7.6	5.4	10.0	27.9	18.8	24.0	11.1	1,424.2
1982 .....	7.6	1,264.5	--	49.0	18.1	6.4	7.4	5.8	10.1	27.5	19.1	24.2	11.6	1,451.4
1983 .....	7.4	1,248.3	--	49.5	16.1	6.2	7.7	5.5	10.3	26.5	19.4	24.1	10.8	1,431.8
1984 .....	7.9	1,292.1	--	51.6	16.2	6.4	8.4	6.4	10.6	27.7	19.8	24.6	10.7	1,482.5
1985 .....	8.4	1,250.6	--	52.2	20.7	6.0	7.8	8.2	10.9	27.8	19.6	25.1	13.1	1,450.3
1986 .....	6.8	1,222.8	--	46.9	14.0	6.2	6.9	8.6	11.2	28.0	19.4	25.0	10.8	1,406.7
1987 .....	7.3	1,280.5	--	48.5	13.1	6.6	6.6	8.1	11.3	28.5	19.0	24.9	11.9	1,466.3
1988 .....	7.8	1,165.8	--	49.9	12.4	6.4	7.0	9.4	11.3	29.6	18.7	26.3	15.8	1,360.3
1989 .....	8.7	1,274.4	--	44.2	12.7	6.7	7.1	7.7	12.4	30.3	18.5	26.2	15.6	1,464.7
1990 .....	9.6	1,241.7	--	43.5	17.5	7.1	7.4	7.0	12.4	30.6	19.0	24.9	17.5	1,438.0
1991 .....	9.6	1,269.3	--	42.1	14.0	6.2	7.1	8.0	12.5	30.8	19.0	25.1	18.1	1,461.7
1992 .....	9.1	1,104.0	--	44.3	13.8	6.8	7.0	7.5	12.6	31.7	17.0	25.3	15.7	1,294.8
1993 .....	9.3	1,048.8	--	43.4	14.1	7.2	7.5	9.1	12.4	33.7	19.4	25.7	16.2	1,246.8
1994 .....	9.4	977.0	--	42.1	14.0	7.5	7.9	10.3	12.6	35.0	19.8	25.6	17.1	1,178.2
1995 .....	9.0	926.0	--	47.3	13.7	6.1	6.4	10.2	12.4	36.2	18.7	25.4	17.1	1,128.5
1996 .....	9.1	904.5	--	44.6	14.5	6.6	4.3	12.1	11.5	36.4	19.6	26.8	17.7	1,107.7
1997 .....	7.4	880.0	--	43.1	14.4	7.9	6.6	12.0	12.0	40.8	19.1	27.3	20.8	1,091.2
1998 .....	7.9	837.1	--	31.5	14.1	7.4	6.4	15.8	11.7	39.5	18.5	27.6	19.5	1,037.1
1999 .....	7.8	810.7	--	27.0	14.4	7.1	7.5	15.4	11.4	39.8	22.6	27.5	19.8	1,010.9
2000 .....	7.4	779.1	--	30.5	17.6	8.0	7.8	19.7	11.1	43.3	21.2	27.0	20.3	993.1
2001 .....	7.4	787.2	--	31.1	18.4	8.5	9.5	19.7	10.9	43.4	17.8	27.7	20.7	1,002.3
2002 .....	7.2	837.5	--	30.7	17.5	8.0	8.2	17.7	10.7	41.6	18.3	27.7	18.4	1,043.4
2003 .....	7.7	895.1	18.3	31.9	18.5	10.1	7.3	22.7	10.8	50.9	5.5	30.6	22.7	1,132.3
2004 .....	7.0	960.7	23.5	31.4	18.3	8.8	8.7	17.5	9.9	50.5	5.2	29.9	20.4	1,191.7
2005 .....	7.5	933.2	18.9	29.6	18.4	9.6	8.6	18.8	10.3	53.5	5.0	30.0	23.2	1,166.4
2006 .....	6.8	843.7	17.1	32.9	18.2	9.3	8.1	23.5	10.2	51.8	4.6	29.3	20.9	1,076.4
2007 .....	6.8	864.6	17.1	31.5	19.1	9.9	7.5	20.7	10.6	45.8	5.6	30.0	21.0	1,090.2
2008 .....	6.5	910.8	22.0	32.1	18.8	10.3	7.1	19.0	10.8	47.1	7.7	29.0	22.4	1,143.4
2009 .....	6.6	874.3	18.6	31.1	18.6	10.8	7.9	16.5	10.2	44.2	4.3	29.9	21.8	1,094.8
2010 .....	6.8	889.9	21.2	31.7	18.8	10.4	7.3	15.7	10.1	43.3	5.7	30.2	21.8	1,112.7
2011 .....	8.3	890.3	20.3	33.1	18.5	10.5	7.3	13.9	10.1	43.0	6.7	30.6	21.4	1,114.1
2012 .....	6.7	828.5	20.1	30.3	16.3	10.0	6.7	15.1	8.9	40.8	5.6	29.7	20.5	1,039.3
2013 .....	7.3	749.5	18.9	28.9	16.4	10.5	6.2	15.3	8.7	41.9	5.3	29.9	20.4	959.3
2014 .....	6.3	730.6	18.5	29.4	17.0	9.5	6.2	15.6	8.3	43.0	5.2	31.4	20.6	941.5
2015 .....	6.2	734.5	17.9	30.1	16.3	9.0	6.8	16.2	8.4	44.0	6.0	30.7	19.8	945.9
2016 .....	6.2	709.2	18.1	28.9	15.8	8.7	6.4	15.6	8.5	43.9	6.0	30.3	19.5	917.2
2017 .....	6.3	707.9	19.2	28.8	15.0	8.8	5.9	15.5	8.6	43.7	6.6	29.1	19.7	915.1
2018 .....	6.1	690.6	16.8	27.3	15.6	10.0	6.1	16.2	8.4	45.5	5.8	29.7	18.8	897.0
2019 .....	5.9	682.1	16.2	27.2	15.4	9.8	6.2	15.8	8.5	46.0	5.9	31.9	19.1	890.0
2020 .....	5.4	648.8	17.1	26.4	14.4	9.5	5.5	14.6	8.1	46.1	5.5	30.6	17.0	849.0
2021 .....	6.4	650.7	15.9	27.5	14.4	9.1	5.4	14.5	8.1	45.5	5.6	30.3	18.1	851.5
2022 .....	8.0	622.5	16.5	26.3	13.4	9.6	6.3	14.5	8.4	48.3	5.5	30.8	17.3	827.2

<sup>a</sup> For 1975 and 1976, the U.S. Government's fiscal year was July 1 through June 30. Beginning in 1977, the U.S. Government's fiscal year is October 1 through September 30 (for example, fiscal year 2014 is October 2013 through September 2014).

<sup>b</sup> U.S. Department of Homeland Security.

<sup>c</sup> General Services Administration.

<sup>d</sup> U.S. Department of Health and Human Services.

<sup>e</sup> National Aeronautics and Space Administration.

<sup>f</sup> Includes all U.S. government agencies not separately displayed. See <http://ctsedweb.ee.doe.gov/Annual/Report/AgencyReference.aspx> for agency list.  
-- =Not applicable.

Notes: • Data in this table are developed using conversion factors that often

differ from those in Tables A1–A6. • Data include energy consumed at foreign installations and in foreign operations, including aviation and ocean bunkering, primarily by the U.S. Department of Defense. U.S. Government energy use for electricity generation and uranium enrichment is excluded. • Totals may not equal sum of components due to independent rounding.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all annual data beginning in 1975.

Sources: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Federal Energy Management Program. See <http://ctsedweb.ee.doe.gov/Annual/Report/Report.aspx>, "A-1 Total Site-Delivered Energy Use in All End-Use Sectors, by Federal Agency (Billion Btu)".

**Table 2.8 U.S. Government Energy Consumption by Source, Fiscal Years**

(Trillion Btu)

Fiscal Year <sup>a</sup>	Coal	Natural Gas <sup>b</sup>	Petroleum						Other Mobility Fuels <sup>f</sup>	Electricity	Purchased Steam and Other <sup>g</sup>	Total
			Aviation Gasoline	Fuel Oil <sup>c</sup>	Jet Fuel	LPG <sup>d</sup>	Motor Gasoline <sup>e</sup>	Total				
1975 .....	77.9	166.2	22.0	376.0	707.4	5.6	63.2	1,174.2	0.0	141.5	5.1	1,565.0
1976 .....	71.3	151.8	11.6	329.7	610.0	4.7	60.4	1,016.4	.0	139.3	4.6	1,383.4
1977 .....	68.4	141.2	8.8	348.5	619.2	4.1	61.4	1,042.1	.0	141.1	5.7	1,398.5
1978 .....	66.0	144.7	6.2	332.3	601.1	3.0	60.1	1,002.9	.0	141.0	6.4	1,360.9
1979 .....	65.1	148.9	4.7	327.1	618.6	3.7	59.1	1,013.1	.0	141.2	7.1	1,375.4
1980 .....	63.5	147.3	4.9	307.7	638.7	3.8	56.5	1,011.6	.2	141.9	6.8	1,371.2
1981 .....	65.1	142.2	4.6	351.3	653.3	3.5	53.2	1,066.0	.2	144.5	6.2	1,424.2
1982 .....	68.6	146.2	3.6	349.4	672.7	3.7	53.1	1,082.5	.2	147.5	6.2	1,451.4
1983 .....	62.4	147.8	2.6	329.5	673.4	3.8	51.6	1,060.8	.2	151.5	9.0	1,431.8
1984 .....	65.3	157.4	1.9	342.9	693.7	3.9	51.2	1,093.6	.2	155.9	10.1	1,482.5
1985 .....	64.8	149.9	1.9	292.6	705.7	3.8	50.4	1,054.3	.2	167.2	13.9	1,450.3
1986 .....	63.8	140.9	1.4	271.6	710.2	3.6	45.3	1,032.1	.3	155.8	13.7	1,406.7
1987 .....	67.0	145.6	1.0	319.5	702.3	3.6	43.1	1,069.5	.4	169.9	13.9	1,466.3
1988 .....	60.2	144.6	6.0	284.8	617.2	2.7	41.2	951.9	.4	171.2	32.0	1,360.3
1989 .....	48.7	152.4	.8	245.3	761.7	3.5	41.1	1,052.4	2.2	188.6	20.6	1,464.7
1990 .....	44.3	159.4	.5	245.2	732.4	3.8	37.2	1,019.1	2.6	193.6	19.1	1,438.0
1991 .....	45.9	154.1	.4	232.6	774.5	3.0	34.1	1,044.7	6.0	192.7	18.3	1,461.7
1992 .....	51.7	151.2	1.0	200.6	628.2	3.0	35.6	868.4	8.4	192.5	22.5	1,294.8
1993 .....	38.3	152.9	.7	187.0	612.4	3.5	34.5	838.1	5.8	193.1	18.6	1,246.8
1994 .....	35.0	143.9	.6	198.5	550.7	3.2	29.5	782.6	7.7	190.9	18.2	1,178.2
1995 .....	31.7	149.4	.3	178.4	522.3	3.0	31.9	735.9	8.4	184.8	18.2	1,128.5
1996 .....	23.3	147.3	.2	170.5	513.0	3.1	27.6	714.4	18.7	184.0	20.1	1,107.7
1997 .....	22.5	153.8	.3	180.0	475.7	2.6	39.0	697.6	14.5	183.6	19.2	1,091.2
1998 .....	23.9	140.4	.2	174.5	445.5	3.5	43.0	666.8	5.9	181.4	18.8	1,037.1
1999 .....	21.2	137.4	.1	162.1	444.7	2.4	41.1	650.4	.4	180.0	21.5	1,010.9
2000 .....	22.7	133.8	.2	171.3	403.1	2.5	43.9	621.0	1.8	193.6	20.2	993.1
2001 .....	18.8	133.7	.2	176.9	415.2	3.1	42.5	638.0	4.8	188.4	18.6	1,002.3
2002 .....	16.9	133.7	.2	165.6	472.9	2.8	41.3	682.8	3.2	188.3	18.5	1,043.4
2003 .....	18.1	135.5	.3	190.8	517.9	3.2	46.3	758.4	3.3	193.8	23.2	1,132.3
2004 .....	17.4	135.3	.2	261.4	508.2	2.9	44.1	816.9	3.1	197.1	22.0	1,191.7
2005 .....	17.1	135.7	.4	241.4	492.2	3.4	48.8	786.1	5.6	197.6	24.3	1,166.4
2006 .....	23.5	132.6	.6	209.3	442.6	2.7	48.3	703.6	2.1	196.7	18.2	1,076.4
2007 .....	20.4	131.5	.4	212.9	461.1	2.7	46.5	723.7	2.9	194.9	16.7	1,090.2
2008 .....	20.8	129.6	.4	198.4	525.4	2.3	49.0	775.4	3.6	196.2	17.9	1,143.4
2009 .....	20.3	131.7	.3	166.4	505.7	3.2	48.3	723.9	10.1	191.3	17.7	1,094.8
2010 .....	20.0	130.1	.4	157.8	535.8	2.5	51.3	747.7	3.0	193.7	18.2	1,112.7
2011 .....	18.5	124.7	.9	166.5	533.6	2.0	52.7	755.8	2.7	193.2	19.1	1,114.1
2012 .....	15.9	116.2	.4	148.6	493.5	1.7	50.1	694.4	3.1	187.2	22.5	1,039.3
2013 .....	14.3	122.5	.7	140.0	424.0	1.9	46.6	613.2	2.8	184.7	21.8	959.3
2014 .....	13.5	125.6	.3	133.5	414.3	1.8	44.9	594.8	3.6	182.1	21.9	941.5
2015 .....	12.6	122.2	.3	134.4	418.9	1.8	46.8	602.2	3.7	184.3	20.9	945.9
2016 .....	10.2	115.4	.3	129.7	403.9	1.7	46.5	582.2	3.6	184.5	21.4	917.2
2017 .....	9.1	115.1	.3	135.1	400.1	1.5	46.4	583.5	2.7	181.7	23.0	915.1
2018 .....	6.2	125.8	.3	127.8	383.2	1.7	45.5	558.5	3.0	180.0	23.6	897.0
2019 .....	5.0	131.7	.3	125.4	376.8	1.9	46.6	551.0	2.7	178.2	21.5	890.0
2020 .....	5.2	128.3	.2	129.6	345.0	1.7	43.3	520.0	1.6	173.7	20.3	849.0
2021 .....	5.3	129.6	.4	122.2	352.0	1.7	44.9	521.2	1.9	173.1	20.5	851.5
2022 .....	3.5	128.8	.2	126.4	326.9	1.6	44.4	499.5	1.8	171.8	21.8	827.2

<sup>a</sup> For 1975 and 1976, the U.S. Government's fiscal year was July 1 through June 30. Beginning in 1977, the U.S. Government's fiscal year is October 1 through September 30 (for example, fiscal year 2014 is October 2013 through September 2014).

<sup>b</sup> Natural gas, plus a small amount of supplemental gaseous fuels.

<sup>c</sup> Distillate fuel oil, including diesel fuel; and residual fuel oil, including Navy Special.

<sup>d</sup> Liquefied petroleum gases, primarily propane.

<sup>e</sup> Includes E10 (a mixture of 10% ethanol and 90% motor gasoline) and E15 (a mixture of 15% ethanol and 85% motor gasoline).

<sup>f</sup> Other types of fuel used in vehicles and equipment. Primarily includes alternative fuels such as compressed natural gas (CNG); liquefied natural gas (LNG); E85 (a mixture of 85% ethanol and 15% motor gasoline); B20 (a mixture of 20% biodiesel and 80% diesel fuel); B100 (100% biodiesel); hydrogen; and methanol.

<sup>g</sup> Other types of energy used in facilities. Primarily includes chilled water, but also includes small amounts of renewable energy such as wood and solar thermal.

Notes: • Data in this table are developed using conversion factors that often differ from those in Tables A1–A6. • Data include energy consumed at foreign installations and in foreign operations, including aviation and ocean bunkering, primarily by the U.S. Department of Defense. U.S. Government energy use for electricity generation and uranium enrichment is excluded. • Totals may not equal sum of components due to independent rounding.

Web Page: See <http://www.eia.gov/totalenergy/data/monthly/#consumption> (Excel and CSV files) for all annual data beginning in 1975.

Sources: U.S. Department of Energy, Office of Energy Efficiency and Renewable Energy, Federal Energy Management Program. See <http://ctsedweb.ee.doe.gov/Annual/Report/Report.aspx>, "A-5 Historical Federal Energy Consumption and Cost Data by Agency and Energy Type (FY 1975 to Present)".

## Energy Consumption by Sector

**Note 1. Electrical System Energy Losses.** Electrical system energy losses are calculated as the difference between total primary consumption by the electric power sector (see Table 2.6) and the total energy content of electricity sales to ultimate customers (see Tables 7.6 and A6). Most of these losses occur at steam-electric power plants (conventional and nuclear) in the conversion of heat energy into mechanical energy to turn electric generators. The loss is a thermodynamically necessary feature of the steam-electric cycle. In addition to conversion losses, other losses include power plant use of electricity, transmission and distribution of electricity from power plants to end-use consumers (also called "line losses"), and unaccounted-for electricity. Total losses are allocated to the end-use sectors in proportion to each sector's share of total electricity sales. Overall, about two thirds of total energy input is lost in conversion. Currently, of electricity generated, approximately 5% is lost in plant use and 7% is lost in transmission and distribution.

**Note 2. Other Energy Losses.** Similar to electrical system energy losses, there are also other energy losses from energy consumption not separately identified. There are losses in the production of energy, the transformation of one form of energy to another form of energy, and the distribution and use of energy. For example, there are transformation losses in the process of refining crude oil into usable petroleum products, processing natural gas into marketable dry gas, and in the process of converting energy from the sun into usable energy with solar panels. All uses of primary energy have efficiency losses, usually in the form of heat, when energy is converted to do useful work. Examples include when motor gasoline is burned to move vehicles, when natural gas is burned to heat homes, or in any household appliance that uses electricity. The Lawrence Livermore National Laboratory estimates primary energy losses by end-use sector by applying an end-use efficiency factor to EIA's *Monthly Energy Review* consumption data. <https://flowcharts.llnl.gov/>.

**Note 3. Energy Consumption Data and Surveys.** Most of the data in this section of the Monthly Energy Review (MER) are developed from a group of energy-related surveys, typically called "supply surveys," conducted by the U.S. Energy Information Administration (EIA). Supply surveys are directed to suppliers and marketers of specific energy sources. They measure the quantities of specific energy sources produced, or the quantities supplied to the market, or both. The data obtained from EIA's supply surveys are integrated to yield the summary consumption statistics published in this section (and in Section 1) of the MER.

Users of EIA's energy consumption statistics should be aware of a second group of energy-related surveys, typically called "consumption surveys." Consumption surveys gather information on the types of energy consumed by end users of energy, along with the characteristics of those end users that can be associated with energy use. For example, the "Manufacturing Energy Consumption Survey" belongs to the consumption survey group because it collects information directly from end users (the manufacturing establishments). There are important differences between the supply and consumption surveys that need to be taken into account in any analysis that uses both data sources. For information on those differences, see "Energy Consumption by End-Use Sector, A Comparison of Measures by Consumption and Supply Surveys," DOE/EIA-0533, U.S. Energy Information Administration, Washington, DC, April 6, 1990.

### Table 2.2 Sources

#### *Coal*

1949–2007: Residential sector coal consumption data from Table 6.2 are converted to Btu by multiplying by the residential and commercial sectors coal consumption heat content factors in Table A5.

#### *Natural Gas*

1949–1979: Residential sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4.

1980 forward: Residential sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4. The residential sector portion of supplemental gaseous fuels data in Btu is estimated using the method described in Note 3, "Supplemental Gaseous Fuels," at the end of Section 4. Residential sector natural gas (excluding supplemental gaseous fuels) consumption is equal to residential sector natural gas (including supplemental gaseous fuels) consumption minus the residential sector portion of supplemental gaseous fuels.

### ***Petroleum***

1949 forward: Table 3.8a.

### ***Fossil Fuels Total***

1949–2007: Residential sector total fossil fuels consumption is the sum of the residential sector consumption values for coal, natural gas, and petroleum.

2008 forward: Residential sector total fossil fuels consumption is the sum of the residential sector consumption values for natural gas and petroleum.

### ***Renewable Energy***

1949 forward: Table 10.2a.

### ***Total Primary Energy Consumption***

1949 forward: Residential sector total primary energy consumption is the sum of the residential sector consumption values for fossil fuels and renewable energy.

### ***Electricity Sales to Ultimate Customers***

1949 forward: Residential sector electricity sales to ultimate customers from Table 7.6 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

### ***End-Use Energy Consumption***

1949 forward: Residential sector end-use energy consumption is the sum of residential sector total primary energy consumption and residential sector electricity sales to ultimate customers.

### ***Electrical System Energy Losses***

1949 forward: Total electrical system energy losses are equal to electric power sector total primary energy consumption from Table 2.6 minus total electricity sales to ultimate customers from Table 7.6 (converted to Btu by multiplying by the electricity heat content factor in Table A6). Total electrical system energy losses are allocated to the residential sector in proportion to the residential sector's share of total electricity sales to ultimate customers from Table 7.6. See Note 1, "Electrical System Energy Losses."

### ***Total Energy Consumption***

1949 forward: Residential sector total energy consumption is the sum of the residential sector consumption values for total primary energy, electricity sales to ultimate customers, and electrical system energy losses.

## **Table 2.3 Sources**

### ***Coal***

1949 forward: Commercial sector coal consumption data from Table 6.2 are converted to Btu by multiplying by the residential and commercial sectors coal consumption heat content factors in Table A5.

### ***Natural Gas***

1949–1979: Commercial sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4.

1980 forward: Commercial sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4. The commercial sector portion of supplemental gaseous fuels data in Btu is estimated using the method described in Note 3, "Supplemental Gaseous Fuels," at the end of Section 4. Commercial sector natural gas (excluding supplemental gaseous fuels) consumption is equal to commercial sector natural gas (including supplemental gaseous fuels) consumption minus the commercial sector portion of supplemental gaseous fuels.

## ***Petroleum***

1949–1992: Table 3.8a.

1993–2008: The commercial sector share of motor gasoline consumption is equal to commercial sector motor gasoline consumption from Table 3.7a divided by motor gasoline product supplied from Table 3.5. Commercial sector fuel ethanol (including denaturant) consumption is equal to total fuel ethanol (including denaturant) consumption from Table 10.3 multiplied by the commercial sector share of motor gasoline consumption. Commercial sector petroleum (excluding biofuels) consumption is equal to commercial sector petroleum (including biofuels) consumption from Table 3.8a minus commercial sector fuel ethanol (including denaturant) consumption.

2009 forward: Commercial sector fuel ethanol (minus denaturant) consumption is equal to total fuel ethanol (minus denaturant) consumption from Table 10.3 multiplied by the commercial sector share of motor gasoline consumption (see 1993–2008 sources above). Commercial sector petroleum (excluding biofuels) consumption is equal to commercial sector petroleum (including biofuels) consumption from Table 3.8a minus commercial sector fuel ethanol (minus denaturant) consumption.

## ***Fossil Fuels Total***

1949 forward: Commercial sector total fossil fuels consumption is the sum of the commercial sector consumption values for coal, natural gas, and petroleum.

## ***Renewable Energy***

1949 forward: Table 10.2a.

## ***Total Primary Energy Consumption***

1949 forward: Commercial sector total primary energy consumption is the sum of the commercial sector consumption values for fossil fuels and renewable energy.

## ***Electricity Sales to Ultimate Customers***

1949 forward: Commercial sector electricity sales to ultimate customers from Table 7.6 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

## ***End-Use Energy Consumption***

1949 forward: Commercial sector end-use energy consumption is the sum of commercial sector total primary energy consumption and commercial sector electricity sales to ultimate customers.

## ***Electrical System Energy Losses***

1949 forward: Total electrical system energy losses are equal to electric power sector total primary energy consumption from Table 2.6 minus total electricity sales to ultimate customers from Table 7.6 (converted to Btu by multiplying by the electricity heat content factor in Table A6). Total electrical system energy losses are allocated to the commercial sector in proportion to the commercial sector's share of total electricity sales to ultimate customers from Table 7.6. See Note 1, "Electrical System Energy Losses."

## ***Total Energy Consumption***

1949 forward: Commercial sector total energy consumption is the sum of the commercial sector consumption values for total primary energy, electricity sales to ultimate customers, and electrical system energy losses.

## **Table 2.4 Sources**

### ***Coal***

1949 forward: Coke plants coal consumption from Table 6.2 is converted to Btu by multiplying by the coke plants coal consumption heat content factors in Table A5. Other industrial coal consumption from Table 6.2 is converted to Btu by multiplying by the other industrial coal consumption heat content factors in Table A5. Industrial sector coal consumption is equal to coke plants coal consumption and other industrial coal consumption.

### ***Natural Gas***

1949–1979: Industrial sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4.

1980 forward: Industrial sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4. The industrial sector portion of supplemental gaseous fuels data in Btu is estimated using the method described in Note 3, “Supplemental Gaseous Fuels,” at the end of Section 4. Industrial sector natural gas (excluding supplemental gaseous fuels) consumption is equal to industrial sector natural gas (including supplemental gaseous fuels) consumption minus the industrial sector portion of supplemental gaseous fuels.

### ***Petroleum***

1949–1992: Table 3.8b.

1993–2008: The industrial sector share of motor gasoline consumption is equal to industrial sector motor gasoline consumption from Table 3.7b divided by motor gasoline product supplied from Table 3.5. Industrial sector fuel ethanol (including denaturant) consumption is equal to total fuel ethanol (including denaturant) consumption from Table 10.3 multiplied by the industrial sector share of motor gasoline consumption. Industrial sector petroleum (excluding biofuels) consumption is equal to industrial sector petroleum (including biofuels) consumption from Table 3.8b minus industrial sector fuel ethanol (including denaturant) consumption.

2009 forward: Industrial sector fuel ethanol (minus denaturant) consumption is equal to total fuel ethanol (minus denaturant) consumption from Table 10.3 multiplied by the industrial sector share of motor gasoline consumption (see 1993–2008 sources above). Industrial sector petroleum (excluding biofuels) consumption is equal to industrial sector petroleum (including biofuels) consumption from Table 3.8b minus industrial sector fuel ethanol (minus denaturant) consumption.

### ***Coal Coke Net Imports***

1949 forward: Coal coke net imports are equal to coal coke imports from Table 1.4a minus coal coke exports from Table 1.4b.

### ***Fossil Fuels Total***

1949 forward: Industrial sector total fossil fuels consumption is the sum of the industrial sector consumption values for coal, natural gas, and petroleum, plus coal coke net imports.

### ***Renewable Energy***

1949 forward: Table 10.2b.

### ***Total Primary Energy Consumption***

1949 forward: Industrial sector total primary energy consumption is the sum of the industrial sector consumption values for fossil fuels and renewable energy.

### ***Electricity Sales to Ultimate Customers***

1949 forward: Industrial sector electricity sales to ultimate customers from Table 7.6 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

### ***End-Use Energy Consumption***

1949 forward: Industrial sector end-use energy consumption is the sum of industrial sector total primary energy consumption and residential sector electricity sales to ultimate customers.

### ***Electrical System Energy Losses***

1949 forward: Total electrical system energy losses are equal to electric power sector total primary energy consumption from Table 2.6 minus total electricity sales to ultimate customers from Table 7.6 (converted to Btu by multiplying by the electricity heat content factor in Table A6). Total electrical system energy losses are allocated to the industrial sector in

proportion to the industrial sector's share of total electricity sales to ultimate customers from Table 7.6. See Note 1, "Electrical System Energy Losses."

### *Total Energy Consumption*

1949 forward: Industrial sector total energy consumption is the sum of the industrial sector consumption values for total primary energy, electricity sales to ultimate customers, and electrical system energy losses.

## Table 2.5 Sources

### *Coal*

1949–1977: Transportation sector coal consumption data from Table 6.2 are converted to Btu by multiplying by the other industrial sector coal consumption heat content factors in Table A5.

### *Natural Gas*

1949 forward: Transportation sector natural gas consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas end-use sectors consumption heat content factors in Table A4.

### *Petroleum*

1949–1992: Table 3.8c.

1993–2008: The transportation sector share of motor gasoline consumption is equal to transportation sector motor gasoline consumption from Table 3.7c divided by motor gasoline product supplied from Table 3.5. Transportation sector fuel ethanol (including denaturant) consumption is equal to total fuel ethanol (including denaturant) consumption from Table 10.3 multiplied by the transportation sector share of motor gasoline consumption. Transportation sector petroleum (excluding biofuels) consumption is equal to transportation sector petroleum (including biofuels) consumption from Table 3.8c minus transportation sector fuel ethanol (including denaturant) consumption.

2009–2011: Transportation sector fuel ethanol (minus denaturant) consumption is equal to total fuel ethanol (minus denaturant) consumption from Table 10.3 multiplied by the transportation sector share of motor gasoline consumption (see 1993–2008 sources above). Transportation sector petroleum (excluding biofuels) consumption is equal to: transportation sector petroleum (including biofuels) consumption from Table 3.8c; minus transportation sector fuel ethanol (minus denaturant) consumption; minus biodiesel consumption, calculated using biodiesel data from U.S. Energy Information Administration (EIA), EIA-22M, "Monthly Biodiesel Production Survey"; and biomass-based diesel fuel data from EIA-810, "Monthly Refinery Report," EIA-812, "Monthly Product Pipeline Report," and EIA-815, "Monthly Bulk Terminal and Blender Report" (the data are converted to Btu by multiplying by the biodiesel heat content factor in Table A1); minus renewable diesel fuel and other biofuels refinery and blender net inputs, calculated using "other renewable diesel fuel" and "other renewable fuels" data from EIA-810, "Monthly Refinery Report," and EIA-815, "Monthly Bulk Terminal and Blender Report" (the data are converted to Btu by multiplying by the heat content factors for renewable diesel fuel and other biofuels in Table A1).

2012–2020: Transportation sector fuel ethanol (minus denaturant) consumption is equal to total fuel ethanol (minus denaturant) consumption from Table 10.3 multiplied by the transportation sector share of motor gasoline consumption (see 1993–2008 sources above). Transportation sector petroleum (excluding biofuels) consumption is equal to: transportation sector petroleum (including biofuels) consumption from Table 3.8c; minus transportation sector fuel ethanol (minus denaturant) consumption; minus biodiesel consumption from Table 10.4; minus renewable diesel fuel and other biofuels refinery and blender net inputs, calculated using "other renewable diesel fuel" and "other renewable fuels" data from EIA-810, "Monthly Refinery Report," and EIA-815, "Monthly Bulk Terminal and Blender Report" (the data are converted to Btu by multiplying by the heat content factors for renewable diesel fuel and other biofuels in Table A1).

2021 forward: Transportation sector fuel ethanol (minus denaturant) consumption is equal to total fuel ethanol (minus denaturant) consumption from Table 10.3 multiplied by the transportation sector share of motor gasoline consumption (see 1993–2008 sources above). Transportation sector petroleum (excluding biofuels) consumption is equal to: transportation sector petroleum (including biofuels) consumption from Table 3.8c; minus transportation sector fuel ethanol (minus denaturant) consumption; minus biodiesel, renewable diesel fuel, and other biofuels refinery and

blender net inputs and products supplied, calculated using “biofuels except fuel ethanol” refinery and blender net inputs and products supplied from U.S. Energy Information Administration (EIA), *Petroleum Supply Annual* and *Petroleum Supply Monthly* (data are converted to Btu by multiplying by the appropriate heat content factors in Table A1).

### ***Fossil Fuels Total***

1949–1977: Transportation sector total fossil fuels consumption is the sum of the transportation sector consumption values for coal, natural gas, and petroleum.

1978 forward: Transportation sector total fossil fuels consumption is the sum of the transportation sector consumption values for natural gas and petroleum.

### ***Renewable Energy***

1981 forward: Table 10.2b.

### ***Total Primary Energy Consumption***

1949 –1980: Transportation sector total primary energy consumption is equal to transportation sector fossil fuels consumption.

1981 forward: Transportation sector total primary energy consumption is the sum of the transportation sector consumption values for fossil fuels and renewable energy.

### ***Electricity Sales to Ultimate Customers***

1949 forward: Transportation sector electricity sales to ultimate customers from Table 7.6 are converted to Btu by multiplying by the electricity heat content factor in Table A6.

### ***End-Use Energy Consumption***

1949 forward: Transportation sector end-use energy consumption is the sum of transportation sector total primary energy consumption and residential sector electricity sales to ultimate customers.

### ***Electrical System Energy Losses***

1949 forward: Total electrical system energy losses are equal to electric power sector total primary energy consumption from Table 2.6 minus total electricity sales to ultimate customers from Table 7.6 (converted to Btu by multiplying by the electricity heat content factor in Table A6). Total electrical system energy losses are allocated to the transportation sector in proportion to the transportation sector’s share of total electricity sales to ultimate customers from Table 7.6. See Note 1, “Electrical System Energy Losses.”

### ***Total Energy Consumption***

1949 forward: Transportation sector total energy consumption is the sum of the transportation sector consumption values for total primary energy, electricity sales to ultimate customers, and electrical system energy losses.

## **Table 2.6 Sources**

### ***Coal***

1949 forward: Electric power sector coal consumption data from Table 6.2 are converted to Btu by multiplying by the electric power sector coal consumption heat content factors in Table A5.

### ***Natural Gas***

1949–1979: Electric power sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas electric power sector consumption heat content factors in Table A4.

1980 forward: Electric power sector natural gas (including supplemental gaseous fuels) consumption data from Table 4.3 are converted to Btu by multiplying by the natural gas electric power sector consumption heat content factors in Table A4. The electric power sector portion of supplemental gaseous fuels data in Btu is estimated using the method described in Note 3, “Supplemental Gaseous Fuels,” at the end of Section 4. Electric power sector natural gas (excluding

supplemental gaseous fuels) consumption is equal to electric power sector natural gas (including supplemental gaseous fuels) consumption minus the electric power sector portion of supplemental gaseous fuels.

### ***Petroleum***

1949 forward: Table 3.8c.

### ***Fossil Fuels Total***

1949 forward: Electric power sector total fossil fuels consumption is the sum of the electric power sector consumption values for coal, natural gas, and petroleum.

### ***Nuclear Electric Power***

1949 forward: Nuclear electricity net generation data from Table 7.2a are converted to Btu by multiplying by the nuclear heat rate factors in Table A6.

### ***Renewable Energy***

1949 forward: Table 10.2c.

### ***Electricity Net Imports***

1949 forward: Electricity net imports are equal to electricity imports from Table 1.4a minus electricity exports from Table 1.4b.

### ***Total Primary Energy Consumption***

1949 forward: Electric power sector total primary energy consumption is the sum of the electric power sector consumption values for fossil fuels, nuclear electric power, and renewable energy, plus electricity net imports.